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And lastly but most importantly, I thank you, the students who are using these books to prepare for putting your trust in us. I assure, we at Crack Every Test will do everything in our power to give you the best guidance and will work hard to build your future.

- Jigar Parekh
Founder, Crack Every Test
JBIMS,22

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DI: FILL IN THE BLANKS

Exercise – 1

Directions (1-5): Study the table carefully and answer the questions given below.

The table chart given below shows the number of students who appeared for High-school exams from the Thane district over years 2006, 2007, 2008, and 2009 and percentage of passed and number of failed students. Some data is missing.

Year	Total students that appeared in high school exam	Percentage Of Students Passed	No of Students Failed
2006	8000	75%	-
2007	10000	-	2250
2008	9000	90%	-
2009	12500	-	2750

Note: Total number of appeared students = (Number of passed students + Number of failed students)

1. Find the sum of total number of failed students in the year 2008 and total number of passed students in the year 2006.
   A. 6900 B. 6450
   C. 7100 D. 6800
   E. 7250
2. Total number of passed students in the year 2006 is what percent of total number of failed students in the year 2009 (Approximately).
   A. 225% B. 218%
   C. 200% D. 250%
   E. 238%
3. Find the average number of failed students in all the given four years.
   A. 1875 B. 1900
   C. 1975 D. 2000
   E. 2075
4. Find the difference between total number of passed students in the year 2007 and total number of failed students in the year 2008.
   A. 6750 B. 6800
   C. 7100 D. 6850
   E. 7050
5. Find the percentage of passed students in the year 2009 out of the total students who appeared in the exam that year.
   A. 78% B. 80%
   C. 75% D. 70%
   E. 82%

Directions (6-10): Study the table carefully to answer the questions that follow:

The table shows the percentage of 50000 people who are involved in different professions, and the percentage of female and male professionals among them.

Professions	Percentage of people	Percentage of Males	Percentage of Females
Banking	20%	–	40%
Law	15%	–	20%
Teaching	30%	40%	–
Engineering	25%	30%	–
Medical	10%	–	60%

6. The total number of people in the Teaching profession is what percentage of the total number of people in the medical profession?
   A. 175% B. 225%
   C. 325% D. 140%
   E. 300%
7. What is the ratio of the total number of males in the Medical and Banking professions together to the total number of females in the same profession together?
   A. 3:5 B. 7:5
   C. 8:7 D. 7:8
   E. None of these
8. The females in the Engineering profession are approximately what percent of the males in the Banking profession?
   A. 135% B. 125%
   C. 146% D. 153%
   E. None of these
9. What is the ratio of the total number of males in the Banking and Medical professions together to the total number of females in the Law and Teaching professions together?
   A. 4:5 B. 3:7
   C. 16:21 D. 21:16
   E. 21:4

10. The total number of females in the Engineering profession is approximately what percentage more than the number of males in the Law profession?
A. 46% B. 51%
C. 37% D. 54%
E. None of these

Directions (11 – 15):

These questions are based on the following table which shows any two among the number of students appeared, the number of students qualified and the number of students who did not qualify in an examination for three years – 2016, 2017 and 2018 from five schools – Viswa Teja, Nawa Jyothi, Brilliant, Vidya Dayini and Gyana Vahini.

School Name		Viswa Teja	Nawa Jyoti	Brilliant	Vidya Dayini	Gyana Vahini
2016	Appeared	500	600	–	400	350
	Qualified	350		250	280	
	Not Qualified		120	70		50
2017	Appeared	550		600	720	
	Qualified		340		450	380
	Not Qualified	80	80	150		40
2018	Appeared	450	560		540	
	Qualified		480	360		320
	Not Qualified	60		90	70	110

Note: Number of students not qualified = Number of students appeared – Number of students qualified

11. How many more students appeared for the exam in 2018 than in 2016 from Nawa Jyoti and Brilliant together?
A. 100 B. 90
C. 80 D. 60
E. 70
12. In 2017, from Vidya Dayini school, the total number of students qualified is what percentage of the number of students appeared?
A. 67% B. 62.5 %
C. 58 % D. 60%
E. 65%
13. In which year, least number of students qualified from five schools put together?
A. 2018 B. 2017
C. 2016 D. 2016 & 2017
E. None of the above
14. What is the ratio of number of students who qualified in 2018 from ViswaTeja School to the number of students who did not qualify in 2016 from Brilliant school?
A. 39:25 B. 2:3
C. 35:8 D. 5:7
E. 39:7
15. What is highest percentage of no of students qualified from any school in given years?
A. 92% B. 90%
C. 80% D. 87%
E. 85%

Directions (16 – 20):

Given below percentage of students selected in four different companies from four different colleges. Answer according to questions below

College	A	B	C	D
Percentage of Students selected exactly in one company	10%	20%		25%
Percentage of Students selected exactly in two companies	20%		40%	15%
Percentage of Students selected exactly in three companies		40%	20%	35%
Percentage of Students selected exactly in four companies	35%	10%	30%	

16. If total no of students in college B are 1500 and all are selected then what is number of students selected exactly in two companies?
A. 550 B. 520
C. 600 D. 450
E. 470
17. If total no students from college C which are selected is 1250 then what is no. of students which are selected in more than two companies?
A. 500 B. 600
C. 375 D. 250
E. 625
18. If total no of students who are selected from college A and D are 1000 and 2000 respectively. then how many more students were selected from college D than college A in exactly three companies?
A. 250 B. 350
C. 300 D. No change
E. None of these
19. Considering data given in above questions, what is total no of students from all colleges selected in more than three companies?
A. 1575 B. 1250

C. 2000 D. 1375
E. None of these

20. Without Considering data given in above questions, what percent more students were selected from college B than college D in exactly 2 companies?
A. 10%
B. 5%
C. 15%
D. Cannot be determined
E. None of these

Directions (21 – 25):

Given below marks of five students in four subjects. Answer according to questions.

Name	Science (out of 100)	Maths (out of 100)	English (out of 100)	History (out of 100)	Total
Abhay	50	60	-	75	240
Kartik	-	72	56	82	-
Kunal	68	57	80	-	280
Jay	92	78	-	78	-
Harshit	42	-	58	62	252

21. If Kartik got 80% in science, then what is total marks of Kartik?
A. 250 B. 290
C. 200 D. 300
E. None of these

22. What is difference bet marks obtain in English of Abhay and marks obtain in maths of Harshit?
A.20 B. 35
C. 25 D. 40
E. None of these

23. What is ratio of marks of Abhay in science to the marks of Kunal in history?
A. 2:1 B. 5:2
C. 2:5 D. 2:3
E. 3:2

24. If jay got 20 more marks than Abhay in English, then what is difference bet total marks obtain by Jay and Harshit?
A. 80 B. 60
C. 65 D. 71
E. 75

25. Considering data given in above questions, who got highest and lowest total marks respectively?
A. Harshit & Jay B. Abhay & Jay
C. Kartik & Jay D. Jay & Kartik
E. Jay & Abhay

Directions (26 – 30):

These questions are based on the following table.

Given below Sales of cars of different companies from the year 2014 to 2018 (in thousands).

Years / Company	2014	2015	2016	2017	2018	Total
Honda	150	-	170	160	-	783
Maruti	140	145	-	165	172	777
Kia	-	150	158	145	150	731
Hyundai	140	145	158	160	165	-
Total	558	-	641	-	662	

26. Which company sold the least number of cars in the given period?
A. Honda B. Maruti
C. Kia D. Hyundai
E. None of these

27. In the year 2014, for which company/companies is the number of cars sold, greater than 25% of the total number of cars sold by all the given companies in given years?
A. Honda B. Maruti
C. Hyundai D. all of these
E. None of these

28. During the given period, in which year is the percentage increase in the number of cars sold by any company over the previous year, the greatest?
A. 2015 B. 2016
C. 2017 D. 2018
E. 2014

29. In year 2017 for which of these two companies is cars sold by them is 224.13% of cars sold by kia
A. Honda & Maruti B. Maruti & Hyundai
C. Kia and Maruti D. Honda & Hyundai
E. Both 1 & 2

30. What is ratio of cars sold by Honda in 2014 to Hyundai in 2017
A. 4:3 B. 3:4
C. 16:15 D. 15:16
E. None

Directions (31 – 35):

These are based on the table given below. Production of four companies (in crore units) in four years.

Company	Years				Total
	2001	2002	2003	2004	
ZIR	168	-	148	150	646
VIP	156	168	-	174	657
CTU	-	158	169	180	635
ZEN	155	140	-	185	640
Total	-	-	636	-	

31. The production of company ZIR in year 2002 is what percent of average production over the years
    A. 112.85% B. 108.58%
    C. 110.50% D. 111.45%
    E. None of these
32. For CTU percentage increase/ decrease is the highest in which year to the previous year
    A. 2001 B. 2002
    C. 2003 D. 2004
    E. None of these
33. For which company average production of first two years is least as compared to last two years.
    A. ZIR B. VIP
    C. CTU D. ZEN
    E. More than one of these
34. Production of all four companies in first two years is what percent of last two years (round off to two decimal)
    A. 82.33% B. 84.33%
    C. 85.36% D. 80.33%
    E. 81%
35. If in year 2005 production of all companies increases by 10% to the previous year then what is total production of year 2005?
    A. 765 B. 758
    C. 738 D. 760
    E. None of these

Directions (36 – 40):

These are based on the table given below.

Institutes	Faculties				
	Arts	Commerce	Science	Management	Total
A	–	124	175	158	–
B	125	–	160	175	620
C	156	148	165	–	610
D	138	–	163	159	618
E	145	144	–	150	613
Total	692	–	837	–	–

No of students studying in different faculties in different institutes

36. What percent of students studying in institute C in science faculty to the total no students studying in institute C
    A. 27.04% B. 26.26%
    C. 29% D. 28.56%
    E. None of these
37. Out of total students studying in institute E what percent of studying in management faculty?
    A. 27.04% B. 24.46%
    C. 25.28% D. 28.56%
    E. None of these
38. The total no of students studying Arts in institutes A, B and C together forms what percent of students studying commerce in B, C, D and E institutes?
    A. 65.28% B. 68.28%
    C. 67.04% D. 70.28%
    E. None of these
39. What is the percentage of students studying science in institute C to the total students studying science?
    A. 19.71% B. 20.58%
    C. 29% D. 15.28%
    E. None of these
40. In institute C if the maximum number of girls studying is 52% in any faculty, then what is the total no. of girls studying in institute C.
    A. 380 B. 307
    C. 379 D. 383
    E. Cannot be determined

Directions (41 – 45):

Given below percentage of shops present in different directions of a district.

Shop types	Direction			
	East	West	North	South
Grocers	25.5	28.2	-	24.5
Chemist	13.2	-	23.5	28.6
General store	20.5	18.2	25.8	-
Cosmetics	-	16.3	23.6	14.6
Food	22	22.8	6.6	14.7
Total	100	100	100	100

41. If there are 400 shops in north direction then what is number of grocery shops in region
A. 80 B. 82
C. 79 D. 83
E. 78

42. The number of food shops in west region forms what percent of food shops in south region
A. 158% B. 130%
C. 150% D. 155%
E. cannot be determined

43. The total number of shops in east and west region is in ratio 3:2. then by how much percent general stores in region east is greater than region west?
A. 65.56% B. 168%
C. 79.25% D. 69.44%
E. cannot be determined

44. If both west and south regions have same number of shops then what is ratio of general store in west region to the chemist store in south region
A. 156:87 B. 87:156
C. 91:143 D. 143:91
E. Cannot be determined

45. If number of shops in regions is in ratio 1:2:3:4 then which type of shop have present in greater number
A. Grocer B. Chemist
C. Food D. Cosmetics
E. Others

Directions (46 – 50):

These are based on the table given below. Given below number of students enrolled in four colleges over given years.

Years	College				
	A	B	C	D	Total
2007	520	–	480	570	2030
2008	540	680	–	520	2230
2009	–	623	510	460	2146
2010	560	–	520	490	2190
2011	–	540	–	450	2088
Total	2713	–	2558	–	

46. In year 2008, 80% students enrolled in college A appeared in competitive examination. Out of these, 60% students passed. How many students passed in examination?
A. 265 B. 258
C. 261 D. 259
E. 260

47. If in year 2010, 70% of students enrolled for computer course then how many students enrolled for course?
A. 1600 B. 1550
C. 1566 D. 1633
E. 1533

48. What is difference between average number of students enrolled in year 2009 to the year 2007?
A. 26 B. 25
C. 29 D. 22
E. 21

49. What is ratio of students enrolled in college A in years 2007 and 2008 to the students enrolled in college D in years 2008 and 2009
A. 39:58 B. 57:26
C. 26:57 D. 53:49
E. 49:53

50. In year 2010, out of total students enrolled 80% are qualify for a certain exam, in which 25% were girls. Then how many boys have passed?
A. 1338 B. 1523
C. 438 D. 1314
E. Cannot be determined

Directions (Q.51– 55):

There are five students who appeared for RBI Grade B exam. Paper consists of 100 questions with 4 marks for each correct answer and 1 mark for each wrong answer.

School Name	Questions Attempted	Correct	Incorrect	Marks Obtained
Animesh	78	–	–	282
Aniket	92	76	–	–
Apurv	98	–	36	–
Atharv	–	30	–	109
Ankit	56	–	–	214

51. Difference between total right number of questions of all students together and total wrong no. of questions of all students together is
A. 141 B. 161
C. 223 D. 156
E. None of these

52. Marks obtained by Animesh and Aniket together is what % of the marks obtained by Apurv, Ankit and Atharv together? (Rounded off to 2 decimal places)
A. 106.54% B. 91.16%
C. 95.20% D. 96.71%
E. 101.71%

53. If the penalty of the wrong answer is 1.33 then marks obtained by Animesh, Apurv and Aniket together is
A. 768.84 B. 896.76
C. 763.44 D. 876.56
E. 776.88

54. If the passing % marks in the exam is 50 marks than at least how many questions has to be answered right by Aniket? (He attempted 92 questions)
A. 58 B. 56
C. 59 D. 55
E. 60

55. What is the percent of marks obtained by all of them together?
A. 59.03% B. 53.15%
C. 52.53% D. 45.05%
E. 55.25%

Direction (56 – 60):

Given table shows the number of applications filled for three various exams (CET, CMAT & XAT) and applicants who attempted these exams in years 2021, 2022 & 2023. Read the data carefully and answer the questions.

Years	CET		CMAT		XAT	
	Filled	Attempted	Filled	Attempted	Filled	Attempted
2021	4000	Q	3200	2400	A	1600
2022	4800	4400	R	2000	2800	B
2023	P	4800	4000	3600	3600	3200

(Some data are missing which you have to calculate as per information provided in question).

(exam & year is in format i.e., CET 2021 is written as CET'21)

(Each applicant filled only one form and there are only these 3 exams)

Note – Total applicants who filled the form of any exam in any year = Total applicants (who attempted + who have not attempted) that exam in that year.

56. In year 2021, only 7200 applicants attempted all three exams together and applicants who filled CMAT'22 are 25% less than those who attempted CET'21, then what percent of applicants attempted CMAT in all given years together?
A. 77 ⅓% B. 93 1/3%
C. 120% D. 83 1/3%
E. 88 1/3%

57. Ratio of applicants who filled CET '23 to those who attempted XAT'22 is 7 : 3 and the number of applicants who attempted XAT '22 is equal to the number of applicants who filled XAT'21 . If 8800 applicants filled XAT in all given years together, then how many applicants did not attempt any exam in 2023?
A. 800 B. 2400
C. 1600 D. 2000
E. 1200

58. Average number of applicants who filled CET in all given years is 16000/3 and percentage of applicants attempted CET'23 out of total who filled CET'23 is the same as that for CMAT'22, then in which year the maximum percentage of applicants attempted CMAT?
A. 2021 & 2022 B. 2022
C. 2022 & 2023 D. 2021
E. 2023

59. Difference between the number of applicants who filled CMAT and those who attempted the same exam is maximum in 2021 and minimum in 2023. If the number of applicants who filled CMAT'22 is equal to the number of applicants who attempted XAT'22,

then what can be the possible ratio of applicants who attempted XAT'22 to those who attempted XAT'23?

A. 1: 1 B. 4: 5
C. 21: 20 D. 3: 4
E. 7: 8

60. How many applicants filled CET'23?
I. no. of applicants who attempted CET'21 is the same as no. of applicants who filled CMAT'22.
II. no. of applicants who did not attempt CET in all given years together is equal to no. of applicants who did not attempt CMAT in all given years together.
A. Both statements together are necessary
B. Either statement I alone or II alone is sufficient
C. Only statement I alone is sufficient
D. Both statements together are not sufficient
E. Only statement II alone is sufficient

Direction (61 – 66): Study the following data carefully and answer the following questions.

Five friends – Anil, Bob, Chintu, Dhruv, and Emma played different games i.e., Carrom, Cricket and Tennis and got different scores. The table given below shows the total scores obtained in three games by each of them, and percentage of chess score out of total score. Also shows the ratio of scores between Cricket and Tennis and the difference between Carrom score and Tennis score.

Friends	Total score	% of Carrom score	Ratio between Cricket and Tennis score	Difference btw Carrom and Tennis score
Anil	1000	P	5:1	160
Bob	Q	30%	5:2	140
Chintu	1200	35%	R:6	60
Dhruv	S	45%	13:9	180
Emma	1600	40%	7:T	240

Some data (P, Q, R, S and T) are missing. You are supposed to find it and answer accordingly.

Note – Carrom Scores obtained by each Student is more than Tennis score obtained by him.

61. What is the difference between total Scores obtained by Bob and Dhruv?
A. 600 B. 800
C. 500 D. 550
E. None of these

62. If the ratio of score obtained by Anil in Carrom and gilli danda is 28 : 13 respectively, then find the score obtained by Anil in gilli danda?
A. 208 B. 182
C. 104 D. 156
E. 130

63. Find the ratio of score obtained by Bob and Dhruv in carrom respectively?
A. 5: 8 B. 6: 7
C. 7: 6 D. 8: 5
E. 9: 10

64. Find the difference between score obtained by Chintu in Cricket and score obtained by Emma in Tennis?
A. 28 B. 32
C. 34 D. 20
E. 40

65. Find the average of the total score obtained by all the five friends?
A. 1600 B. 1200
C. 1800 D. 2000
E. 1400

66. Total score obtained by Chintu is what percent more or less than that of Emma?
A. 24% B. 25%
C. 30% D. 22%
E. 20%

Directions (67-70):

Given below the table shows, total number of ICICI branches in six cities, total number of accounts in these branches and ratio between saving and current accounts in each branch. Some data are missing, which have to be calculated according to given data in questions. Read table carefully and answer the questions given below:

Cities	Total Number of Branches	Total Number of Bank Accounts in all branches	Ratio between Savings and Current Accounts
A	-	-	11:4
B	256	89600	-
C	-	76800	2:1
D	144	-	-
E	-	47600	-
F	224	-	5:2

(Note: (1) Number of accounts opened in each branch are equal in each city
(2) All branches opened only two types of accounts: Saving and Current.)

67. If 5/18th of total current accounts opened in city A are 20000 and average number of accounts opened

in each branch is 1800 then total branches in city A are what percent more or less than total branches in city C. Given that average number of accounts opened in each branch in city C is 800?

A. 48.25% B. 66.25%
C. 46.25% D. 56.25 %
E. 36.25%

68. 13/25th of total current accounts opened in city F are used for daily transactions and remaining used occasionally. If the difference between current accounts used for daily transactions and current accounts used occasionally is 640 then the ratio between average number of accounts opened in each branch in city F to number of branches in city C. (Given that average number of account opened in each branches of city C is 800)

A. 48: 125 B. 127: 48
C. 125: 48 D. 121: 48
E. None of these

69. If in city E all branches charged Rs.25 and Rs.15 for opening one saving account and one current account respectively and total amount generated in opening account from all branches in city E is Rs.1120000 then find the difference between total number of current accounts and saving accounts opened in city E?

A. 28600 B. 33600
C. 31600 D. 30600
E. 32600

70. In city B the ratio between total opened savings account to total opened current accounts is 5 : 2 and in city D the average number of accounts opened in each branch is 550. Find average of total saving accounts opened in city B and D, if in city D ratio between total saving accounts to current accounts in each branch is 7: 4?

A. 57200 B. 53600
C. 56800 D. 56400
E. 49600

Directions (71- 74) :

Table given below shows the Revenue generated by six online stores, and percentage distribution of revenue generated by five different sections in these stores. Some data are missing, calculate the missing data according to given information and answer the following questions: -

Company	Total revenue (In millions)	Percentage distribution of relevant generated by each section				
		Clothing section	Home & Living section	Cosmetic section	Electronic section	Footwear section
Myntra	130	30	17.5	–	5	–
Ajio	–	–	20	–	12.5	15
Jabong	90	10	–	5	15	25
Snapdeal	–	25	–	10	35	–
Flipkart	150	40	–	7.5	35	5
Amazon	110	20	–	10	45	12.5

71. Revenue generated by the home and living section of Ajio is 16 million, then find revenue generated by the clothing and cosmetic section together with Ajio is what percent of the revenue generated by home and living section of Jabong? (in approximate)

A. 116% B. 104%
C. 112% D. 128%
E. 132%

72. The ratio between revenue generated by the footwear section and cosmetic section of Myntra is 10 : 9. Then find the ratio between revenue generated by the footwear section of Myntra to revenue generated by the home & living section of Flipkart?

A.27: 19 B. 15: 26
C. 26: 15 D. 19: 27
E. 26: 11

73. If revenue generated by the electronic section of Ajio is 10 million, then find the difference between revenue generated by cosmetic and clothing section of Ajio and cosmetic and Home & living section of Flipkart? (In million)

A. 12 B. 16
C. 24 D. 8
E. 20

74. The total revenue generated by the clothing section of Snapdeal is 25 million and total revenue generated by the Footwear section of Ajio is 12 million. Find total revenue generated by all sections of Snapdeal is what percent more/less than total revenue generated by all sections of Ajio?

A. 40% B. 15%
C. 30% D. 20%

E. 25%

Directions (75-79): – Study the given table carefully and answer the following question.

The table given below shows the amount invested by 4 persons for different times and at different rates at SI. Some data is missing in this table and you have to calculate missing data according to the questions.

Person	Principal (Rs.)	Rate of Interest	Time (years)	Amount (Rs.)
Suresh		20%	4	23400
Pratik	10000		3	
Dhruv	15000	15%		20625
Hans	16000		2	18000

75. Interest earned by Suresh is how much more/less than that of Hans?
A. Rs 7000 B. Rs 9800
C. Rs 8400 D. Rs 7600
E. Rs 9000

76. Find Dhruv invested for how much time?
A. 3 years B. 2.5 years
C. 3.5 years D. 1.5 years
E. 2 years

77. Amount invested by Suresh is how much percent more than amount invested by Pratik?
A. 30% B. 24%
C. 23 1/13% D. 35%
E. 23 3/13%

78. If the ratio of rate of interest for Dhruv and Pratik is 3 : 5 then, find the ratio between the amount incurred by Pratik and Dhruv.
A. 31: 33 B. 14: 11
C. 29: 22 D. 28: 33
E. 26: 33

79. If Hans and Pratik invested at the same rate of interest then find interest earned by Pratik.
A. Rs 1875 B. Rs 1881
C. Rs 1871 D. Rs 1915
E. Rs 1855

Directions (80-84): –

Table given below gives information about Cost price, Selling price, profit percent and discount percentage of four Items P, Q, R and S. Some data is missing, calculate the data and answer the following questions.

Items	Cost price (Rs.)	Selling price (Rs.)	Profit %	Discount %
P	1000	–	20%	25%
Q	–	1500	25%	16.66%
R	800	900	–	–
S	–	–	10%	45%

80. If the cost price of Item S is 10% more than the cost price of item P, find the Market price of article S?
A. Rs. 2000 B. Rs. 2200
C. Rs. 1900 D. Rs. 1800
E. Rs. 2100

81. Average market price of item P and cost price of item Q is how much percent more than cost price of item R?
A. 75% B. 80%
C. 60% D. 90%
E. 95%

82. If the discount percentage is twice the profit percentage for item R, find the ratio of cost price of item P to market price of item R?
A. 2:3 B. 1:2
C. 2:5 D. 5:6
E. None of these

83. Selling price of item R is what percent of market price of item Q?
A. 1100 B. 1300
C. 616 D. 900
E. 1210

84. If for item S the difference between profit earned and discount given is Rs. 880, find the selling price of the S?
A. 1100 B. 1300
C. 616 D. 900
E. 1210

Direction (85 – 90): –

Given below table shows number of seats available in five different buses and percentage of seats booked in these buses out of total available seats. Read the data carefully and answer the questions.

	Total Seats Available	Percentage of seats booked, out of total available seats
A	40	60%
B	48	75%
C	30	60%
D	NA	80%
E	NA	62.50%

Note – Total seats available in any bus = Booked seats + Vacant seats

(ii) Total seats available in bus D & E together is 130.

(ii) Total vacant seats in all five buses are 80.

85. If total vacant seats in bus C is 60% less than that of in bus E, then find number of vacant seats in D?
A. 12 B. 10
C. 8 D. 14
E. 6

86. Find ratio of total vacant seats in bus B to total booked seats in bus A?
A. 1: 3 B. 1: 2
C. 2: 3 D. 3: 4
E. 1: 1

87. Vacant seats in bus C, are what percent less than vacant seats in bus A?
A. 15% B. 20%
C. 30% D. 25%
E. 36%

88. What percent of seats remained vacant in bus A, C & D, if ratio of total seats booked in bus B to bus E is 18: 25?
A.30% B. 33.66%
C. 31.66% D. 33.33%
E. None of these

89. If difference between total vacant seats in bus D and E is 20, then find ratio of booked seats in D to E?
A. 4: 3 B. 4: 5
C. 4: 7 D. 3: 5
E. 3: 4

90. Find average number of booked seats in bus A, B & C?
A. 26 B. 16
C. 18 D. 22
E. 14

Direction (91– 96):

Table given below shows the number of managers, leaders and other employees who work in five different companies, also given total employee in each company. Some data are missing, calculate the missing data if required. Read the data carefully and answer the questions.

Company	Number of managers	Number of leaders	Number of other Employees	Total number of Employees
P	160	–	–	660
Q	–	250	–	950
R	150	–	670	1220
S	–	270	–	770
T	160	–	420	800

The total number of employees in any company = Number of (managers + leaders + other employees) in that company.

91. If the number of other employees in company P is 50% more than the number of leaders in the same company, then find the number of leaders in company P is what percentage of the total number of employees in company T?
A. 22% B. 35%
C. 25% D. 28%
E. 27%

92. Find the average number of total employees in all the give five companies?
A. 900 B. 880
C. 840 D. 760
E. 920

93. Find the ratio of total number of leaders in company R to the total number of employees in company S?
A. 40:79 B. 40:73
C. 39:74 D. 47:87
E. 40:77

94. If the ratio of the number of managers to the number of other employees in company S is 1:4, then find the number of managers in company T is what percentage more or less than the number of managers in company S?
A. 55% B. 60%
C. 63% D. 58%
E. 73%

95. If the number of managers in company is 25% more than the number of managers in company P, then find the number of other employees in company Q is how much more than the number of leaders in company S?

A. 204 B. 232
C. 254 D. 284
E. 230

96. If the total number of employees in company U is equal to average number of employees in company Q & company S together and the ratio of the number of managers, leaders and other employees in company U is 2:3:5 respectively, then find the number of leaders in company U?
A. 258 B. 178
C. 244 D. 275
E. 250

Direction (97 – 100):

Table given below shows Revenue, expenditure profit and loss percentage of a company in five different years. Read the data carefully and answer the questions.

Note – Positive sign (+) shows profit percentage and negative sign (–) shows loss percentage.

Year	Revenue	Expenditure	Profit/Loss %
2011	1440	–	12.50%
2012	–	1750	-4%
2013	–	–	20%
2014	2268	–	5%
2015	–	–	-30%

$$Profit\ or\ Loss\ \% = \frac{|Revenue - Expenditure|}{Expenditure}$$

97. Find the difference between expenditure of company in the year 2011 and revenue of company in the year 2012?
A. 480 cr. B. 560 cr.
C. 400 cr. D. 640 cr.
E. 720 cr.

98. If profit of company in the year 2013 is two times of profit of company in the year 2011, then find the ratio of expenditure of company in the year 2011 to that of in the year 2013?
A. 4: 7 B. 3 :5
C. 4: 9 D. 4: 5
E. 2: 3

99. Total loss of company in the year 2012 is approximate what percent less than profit of company in the year 2014?
A. 35% B. 30%
C. 25% D. 20%
E. 12%

100. Total loss of company in the year 2012 is 19 4/9% of total loss of company in the year 2015. Find total revenue of company in the year 2011 is what percent more than total expenditure of company in the year 2015?
A. 15% B. 20%
C. 25% D. 30%
E. 35%

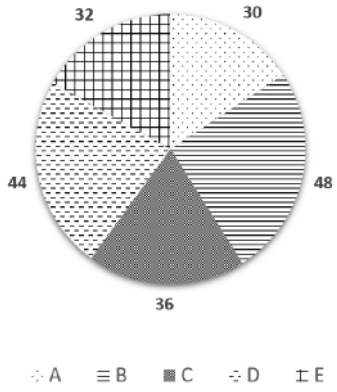
ANSWER KEY:

1) A	21) B	41) B	61) A	81) A
2) B	22) B	42) E	62) E	82) D
3) C	23) D	43) D	63) C	83) C
4) D	24) D	44) C	64) D	84) E
5) A	25) E	45) A	65) B	85) B
6) E	26) C	46) D	66) B	86) B
7) C	27) D	47) E	67) D	87) D
8) C	28) B	48) C	68) C	88) C
9) C	29) E	49) D	69) B	89) B
10) A	30) D	50) D	70) A	90) A
11) B	31) D	51) C	71) B	91) C
12) B	32) B	52) A	72) C	92) B
13) C	33) C	53) C	73) A	93) E
14) E	34) A	54) C	74) E	94) B
15) B	35) B	55) E	75) C	95) E
16) D	36) A	56) D	76) B	96) A
17) E	37) B	57) C	77) A	97) C
18) B	38) C	58) E	78) D	98) D
19) D	39) A	59) B	79) A	99) A
20) D	40) E	60) D	80) B	100) B

DI: VISUAL

Directions (1-5): Study the given Pie Chart and answer the given questions based on it.

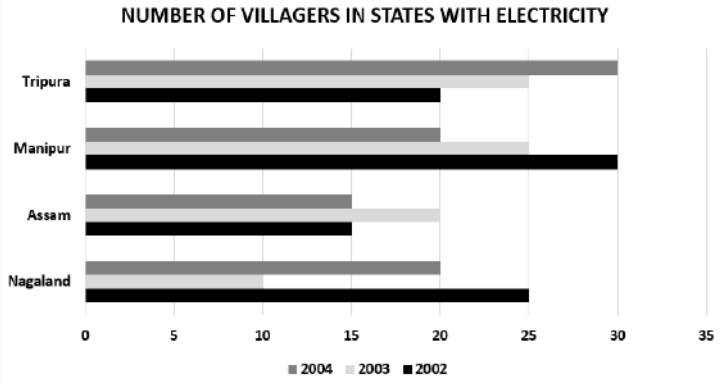
Given below is a pie chart which denotes the number of students of different sections of class 10th who got a distinction.



1. If 33.33% of class E students got a distinction in class 10th what is the number of students in class a who did not score distinction.
   A. 66 B. 69
   C. 64 D. 60
   E. None of the above
2. If 38% of the students in class 10th got distinction. What is the number of students in class 10th.
   A. 450 B. 475
   C. 550 D. 500
   E. None of the above
3. If there are 200 girls in class 10th and 45% of them scored more than 75%. Find the number of boys who got distinction in class 10th.
   A. 100 B. 110
   C. 90 D. 120
   E. 80
4. If 50% of students who got distinction are girls, and there are 225 girls in class 10th in total how many girls did not get distinction.
   A. 140 B. 130
   C. 120 D. 110
   E. None of the above
5. If 750 students sit for the class 10th exam. And 28% of the students fail. What percentage of students passed class 10th but did not get distinction.
   A. 45% B. 49%
   C. 50% D. 52%
   E. None of the above

Directions (6-10) Study the given bar-chart carefully and answer the following questions.

The graph shows the number of villages in four different states where electrification was done in different years.

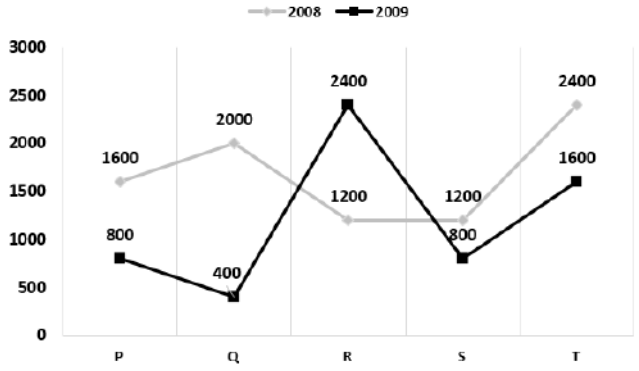


6. The number of villages in Nagaland where electrification was done in 2003 is what percentage of the number of villages in Tripura where electrification was done in 2004?
   A. 55.5% B. 44.4%
   C. 77.7% D. 66.6%
   E. 33.3%
7. What is the ratio of the villages in Assam to those in Manipur where electrification was done in 2003?
   A. 1: 4 B. 3: 4
   C. 1: 2 D. 4: 5
   E. 3: 2
8. In which state was the electrification work done in maximum villages during the given three years?
   A. Assam B. Manipur
   C. Manipur and Tripura D. Nagaland
   E. Manipur and Assam
9. If the cost of electrification of a village is Rs.75 lakh then what is the cost of electrification in four states during the given period?
   A. Rs.2159500000
   B. Rs.1912500000
   C. Rs.2071400000
   D. Rs.2355330000
   E. Rs.1928300000
10. In which year was the electrification work done in maximum number of villages

A. 2002 B. 2003
C. 2004 D. 2003 and 2002
E. 2002 and 2004

Directions (11-15): Study the following information carefully and answer the questions given below.

The below graph shows the number of employees working in five different companies in India in two different years



11. The number of employees working in company R in the year 2008 is what percent of the number of employees working in company P in the same year?
A. 55% B. 65%
C. 75% D. 85%
E. None of these

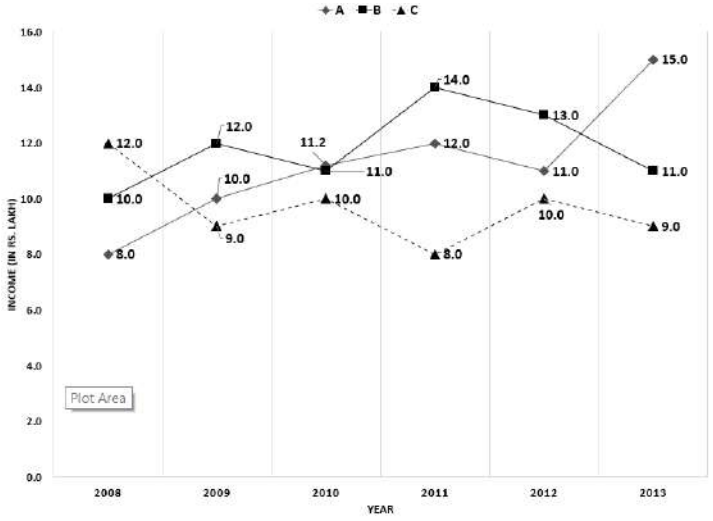
12. What is the respective ratio of the number of employees working in the company Q and S together in the year 2008 to the number of employees working in the company R and T together in the year 2009?
A. 2: 3 B. 3: 4
C. 4: 5 D. 5: 6
E. None of these

13. The number of employees working in the company R in the year 2009 is what percent of the number of employees working in company S in 2009?
A. 100% B. 300%
C. 150% D. 250%
E. None of these

14. Find the average number of employees working in all the companies together in the year 2008.
A. 1680 B. 1520
C. 1160 D. 840
E. None of these

15. Find the ratio of the number of employees working in T in the year 2008 to the number of employees working in Q in 2009?
A. 2:3 B. 3:1
C. 2:9 D. 6:1
E. None of these

Directions (16-20): Study the following line graph carefully and answer the questions given below:



$$Profit\% = \frac{Income - Expenditure}{Expenditure} \times 100$$

16. The percentage increase or decrease in the income of company B is highest in which of the following years?
A. 2013 B. 2012
C. 2011 D. 2009
E. 2010

17. If the expenditure of company A in the year2009 was Rs. 2.25 lakh, then what was the profit percentage of A in that year?
A. 147.28% B. 344.44%
C. 366.66% D. 360%
E. 250%

18. If the profit percentage of company B in the year 2011 is 20%, what was its expenditure in that year? (In Rs. lakh)
A. 11.67 B. 9.16
C. 11.33 D. 13.33
E. 16.67

19. What is the average income of company C over all the years? (In Rs. lakh)
A. 9.26 B. 9.66
C. 9.78 D. 9.57
E. 8.67

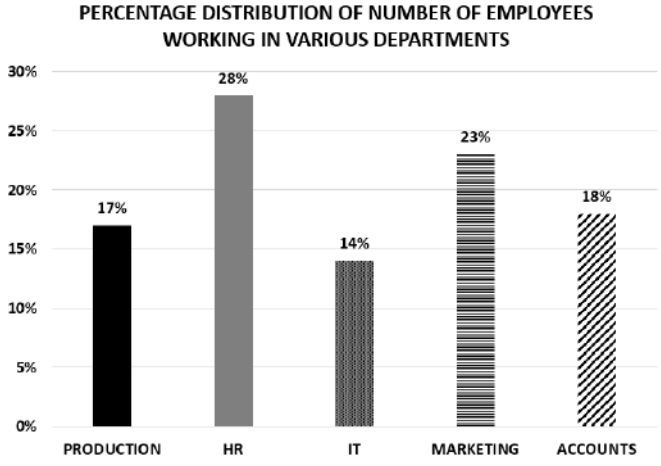
20. What was the approximate percentage increase in the income of company A in the year 2010 as compared with the year 2008?
A. 40% B. 36%
C. 32.5% D. 34.75%

E. 31%

Direction (21-25): Study the following pie chart and table carefully to answer the questions that follow.

Percentage breakup of employees working in various departments of an organization and the ratio of men to women in them

Total number of employees = 7200

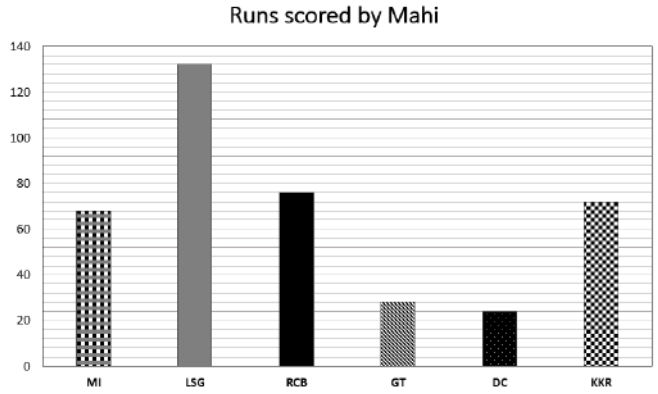


Ratio of Men to Women

Department	Men	Women
Production	11	1
HR	1	3
IT	5	4
Marketing	7	5
Accounts	2	7

21. What is the number of men working in the Marketing department?
    A. 528 B. 966
    C. 504 D. 756
    E. None of these
22. The number of men working in the production department of the organization forms what percent of the total number of employees working in that department? (Rounded off to two digits after decimal)
    A. 89.76 B. 91.67
    C. 88.56 D. 94.29
    E. None of these
23. What is the respective ratio of the number of men working in the Accounts department of the total number of employees working in that department?
    A. 9:2 B. 7:6
    C. 2:9 D. 6:7
    E. None of these
24. What is the respective ratio of the number of women working in the HR department of the organization and the total number of employees in that department?
    A. 3:4 B. 2:5
    C. 2:9 D. 3:7
    E. None of these
25. The number of women working in the IT department of the organization forms approximately what percent of the total number of employees in the organization from all departments together?
    A. 7.5 B. 5.0
    C. 7.0 D. 5.2
    E. 6.2

Direction (26-30): Study the following bar chart carefully to answer the questions that follow.



The following bar graph gives the information of the runs scored by Mahi against the various teams in a cricketing league.

26. If there are a total of 12 games that were played by Mahi's team then what is the average number of runs scored by Mahi whenever he comes out on the pitch.
    A. 33.33 runs B. 66.67 runs
    C. 50 runs D. 80 runs
    E. Cannot be determined
27. What is the ratio of the runs scored by Mahi against LSG to the number of runs scored by him against all the other teams?
    A. 11:23 B. 33:67
    C. 1:2 D. 132:266
    E. None of the above
28. Of the total runs scored by Mahi he scored 72 runs by hitting sixes (6 runs), 136 runs by hitting fours (4 runs), 102 runs by running doubles (2 runs), and the rest he runs singles. If he has faced a total of 374 balls then find the number of dot balls that he faced.

A. 190 B. 185
C. 187 D. 189
E. 177

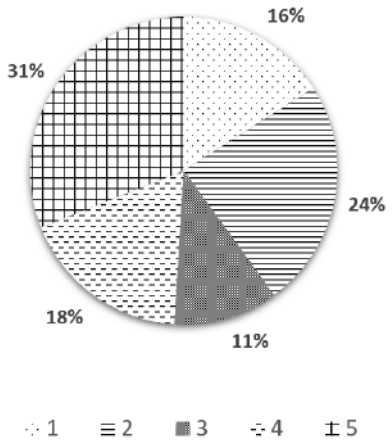
29. Based on the previous question, find out the strike rate of Mahi.
A. 110 B. 105
C. 106 D. 107
E. 109

30. If Mahi got out 11 times during the tournament, then find the batting average of Mahi.
A. 33.33 B. 50
C. 36 D. 35
E. None of the above

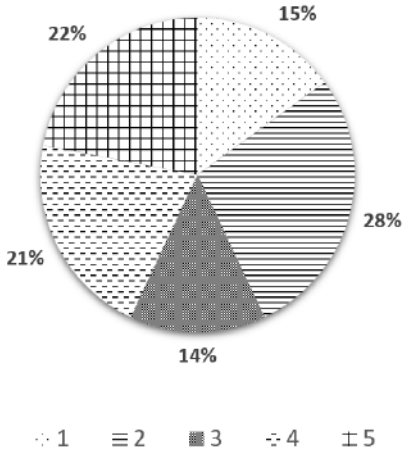
Directions (31-35): Study the following pie - charts carefully and answer the questions given below:

Percentage breakup of the number of children in five different villages and break up of children Attending school from those villages

Total number of students = 5800



Total number of children attending schools = 3600



31. What is the total number of children not attending school from village V_2 and V_3 together?
A. 528 B. 508
C. 518 D. 618
E. 628

32. The number of children attending school from village V_1 is approximate, what percent of the number of children from that village?
A. 54% B. 56%
C. 60% D. 53%
E. 58%

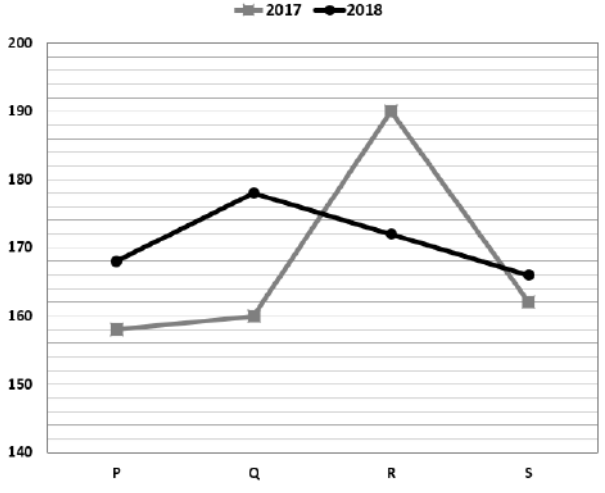
33. What is the approximate average number of children not attending school from village V_2, V_3 and V_4 together?
A. 269 B. 258
C. 264 D. 270
E. 266

34. The number of children not attending school from village V_4 and V_5 is approximately what percent of the total number of children from village V_4 and V_5 together?
A. 43.65% B. 42.5%
C. 48% D. 45.5%
E. 49.45%

35. What is the ratio of the total number of children from village V_4 to the number of children attending school from the same village?
A. 22:21 B. 29:28
C. 29:21 D. 29:27
E. 23:21

Directions (36-40): Study the line graph given below and answer the following questions.

Line graph shows the number of pens sold by 4 different shopkeepers (P, Q, R & S) in 2017 and 2018.



36. Find the average number of pens sold by R & S in both the years.
A. 354 B. 345
C. 352 D. 342
E. 337

37. Find ratio of pens sold by Q & R together in 2017 to pens sold by Q & R together in 2018.
A. 1: 1 B. 2: 3
C. 8: 9 D. 5: 6
E. 5: 4

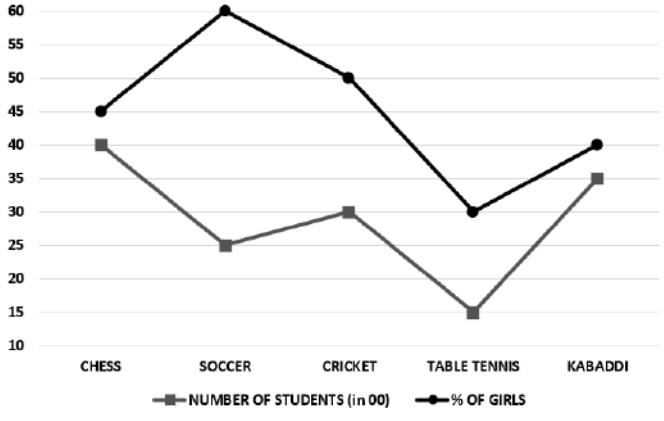
38. Number of pens sold by P & R together in 2018 are what percent more than those sold by Q in 2017?
A. 116 2/3% B. 110%
C. 125% D. 112.5%
E. 120%

39. Number of pens sold by P, R & S together in 2017 are how much more or less than pens sold by these shopkeepers together in 2018?
A. 4 B. 6
C. 8 D. 12
E. 9

40. Find the average number of pens sold by all shopkeepers in 2018?
A. 168 B. 169
C. 171 D. 172
E. 173

Directions (41-45): Study the line chart given below and answer the following questions.

Line chart shows the total number of students (in '00) who play 5 different games (Chess, Soccer, Cricket, Table tennis and Kabaddi) and percentage of girls playing these 5 games.



Note - % of girls playing any game =
(Number of girls playing thay game/ Number of total students playing that game) × 100

41. Boys playing Chess are what percent of girls play Soccer & Cricket together?
A. 62 ⅔ % B. 73 ⅓ %
C. 78 ⅔ % D. 68 ⅓ %
E. 75 ⅔ %

42. Find the ratio of boys playing Cricket and Kabaddi together to girls playing Table tennis.
A. 8: 1 B. 3: 1
C. 5: 1 D. 9: 1
E. 6: 1

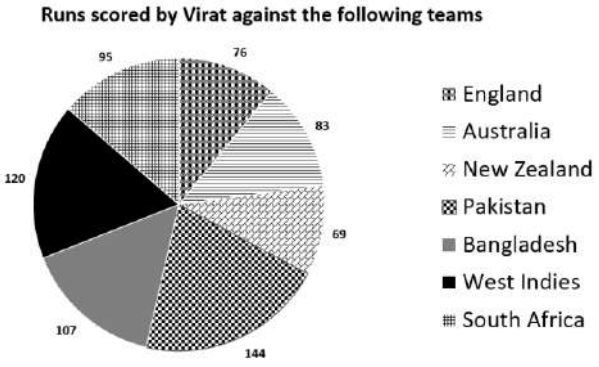
43. Average number of girls playing Chess, Soccer & Table tennis is what percent more or less than boys playing Soccer & Cricket together?
A. 70% B. 30%
C. 90% D. 50%
E. 80%

44. If total students playing Basketball are 60% more than total students playing Soccer and ratio of boys to girls playing Basketball is 7: 3, then find boys playing Basketball and Soccer together are how much more or less than girls playing Basketball and Chess together?
A. 200 B. 1600
C. 1300 D. 500
E. 800

45. Boys playing Chess, Soccer and Table tennis together are how much more or less than girls playing Cricket and Kabaddi together?
A. 1600 B. 1250
C. 1350 D. 1900
E. 1850

Directions (46-50): Study the given Pie Chart and answer the given questions based on it.

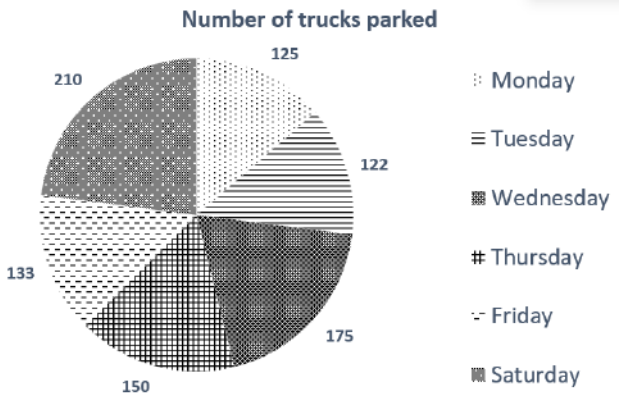
The following chart represents the number of runs scored by Virat Kohli during an ICC event Against various teams.



46. What is the percentage of runs scored by Kohli against Pakistan and Bangladesh?
    A. 35% B. 39%
    C. 36% D. 37%
    E. None of the above
47. What is Virat's average if he lost his wicket 5 times during the tournament?
    A. 138.8 B. 136.67
    C. 132 D. 140
    E. None of the above
48. What is Virat's strike rate if he played a total of 500 balls throughout the tournament?
    A. 110 B. 125
    C. 139.5 D. 144
    E. None of the above
49. What percent of total runs does Virat score against England?
    A. 11.11% B. 9.09%
    C. 12.5% D. 13.33%
    E. None of the above
50. If Kohli hits 25 sixes, 60 fours, 70 twos, and the rest he runs in singles. How many dot balls does he face if the total number of balls he faces is 500?
    A. 149 B. 181
    C. 176 D. 145
    E. 156

Directions (51-55): Study the given Pie Chart and answer the given questions based on it.

The following pie charts provides information of the number of trucks parked at a parking bay during the Onion export season at the Pimpalgaon Baswant market yard.

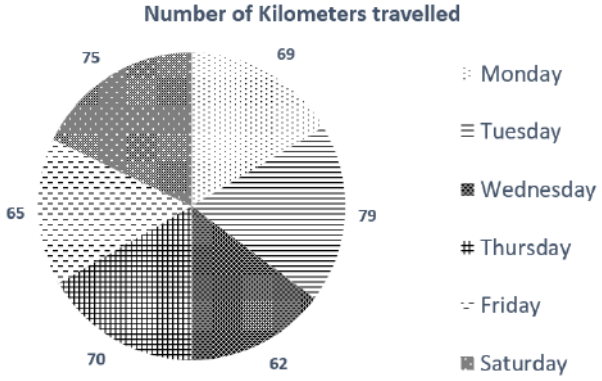


51. If the number of trucks on Monday of the next week increases by 24%, what is the number of trucks that are parked at the bay next week?
    A. 150 B. 160
    C. 155 D. 145
    E. 140
52. If the number of trucks that are parked at the bay on Sunday is 40% of the number of trucks parked throughout the rest of the week. Find the number of trucks parked at the bay parked at the bay on Sunday.
    A. 360 B. 350
    C. 320 D. 366
    E. None of the above
53. If the number of trucks that are parked at the bay on Sunday is 60% of the number of trucks parked throughout the rest of the week. If the number of trucks that are parked at the bay the next week is 200 less than the number of trucks parked at the bay this week. Find the total number of trucks parked at the bay in these two weeks.
    A. 2730 B. 2638
    C. 2328 D. 2037
    E. 2728
54. What percentage of trucks are parked on Saturday?
    A. 22.95% B. 22.75%
    C. 21.95% D. 23.15%
    E. None of the above
55. What percent of trucks are parked at the bay on the weekdays?

A. 76.83% B. 77.04%
C. 75% D. 79.24%
E. None of the above

Directions (56-60): Study the given Pie Chart and answer the given questions based on it.

Mr Gaurav Taneja is touring the country on his cycle. As ridiculous as this idea is, the following pie chart shows the distance covered by him on each day of the week. He rests on Sundays.



56. How many kilometres does he travel in total throughout the week.
A. 440 km B. 450km
C. 420km D. 480km
E. 490km

57. What percentage of the traveling is done by Mr Taneja on Tuesday, Thursday, and Saturday.
A. 53.33% B. 48.33%
C. 66.66% D. 56.33%
E. None of the above

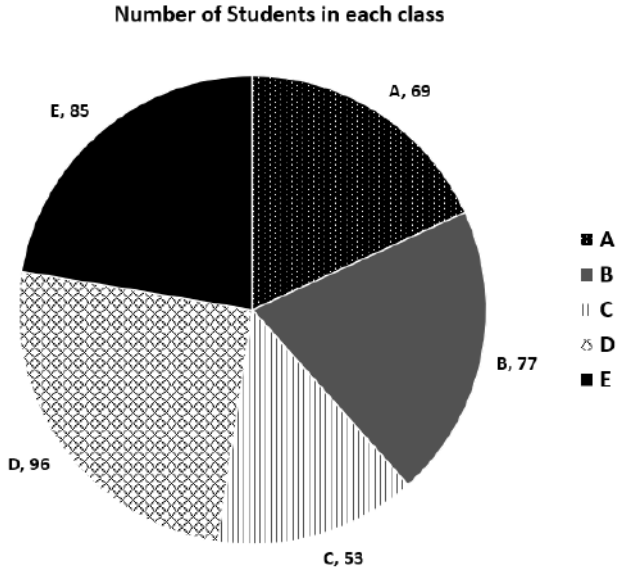
58. If Mr Taneja picks up the pace the next week and coves 35% more distance in the next week than this week. Find the distance travelled by him next week.
A. 597 km B. 540 km
C. 560 km D. 567 km
E. None of the above

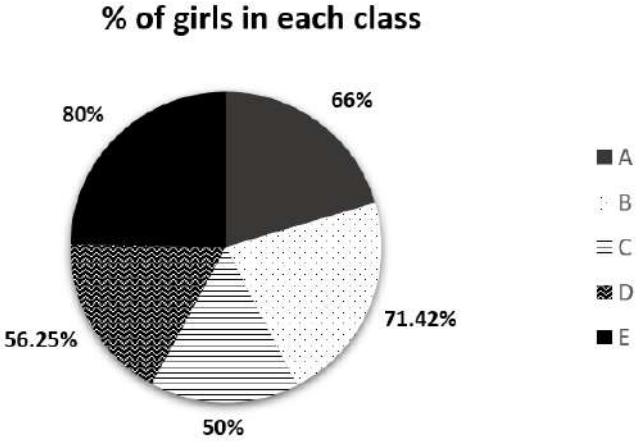
59. Gaurav gets a sore calf and cannot cycle as much as he could this week. Hence the next week his efficiency drops by 40%. Find the distance travelled by him in the next week.
A. 264 B. 252
C. 272 D. 254
E. None of the above

60. If Gaurav aims to travel a total of 5040 kilometres traveling at the same pace, how many weeks does he have to cycle.
A. 11 B. 10
C. 9 D. 13
E. 12

Directions (61-65): Study the given Charts and answer the given questions based on it.

Given below are two pie charts where the first pie chart shows the number of students in each class of:





61. Find the number of boys in class A
A. 26 B. 23
C. 22 D. 21
E. 20

62. If half of the boys fail in an exam. Find the number of boys that pass the exam.
A. 65 B. 66
C. 68 D. 72
E. Cannot be determined

63. Find the number of girls in class A, B, D, and E

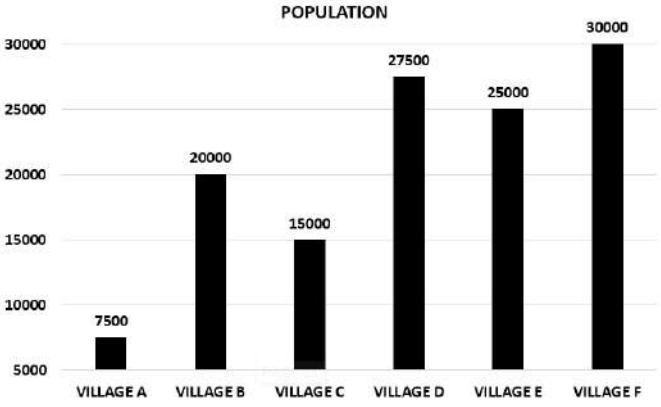
A. 223 B. 224
C. 215 D. 228
E. 233

64. How many boys are there in total?
A. 131 B. 141
C. 151 D. 121
E. 130

65. What is the total number of students?
A. 350 B. 360
C. 371 D. 391
E. 381

Directions (66-70):

Following bar chart represents the number of people in 6 different villages (A, B, C, D, E and F) and the tabular column depicts the ratio of literate to illiterate people and percentage of male living in those villages



Village	Literate:Illiterate	% of Males
A	2:3	52
B	11:9	65
C	13:2	45
D	4:1	70
E	1:3	39
F	11:19	75

66. If 40% of the female from village B is literate, then what is the percentage of male, who is illiterate from village B?
A. 38%
B. 35%
C. 37%
D. Cannot be determined.
E. None of these

67. What is the percentage of literate people in all the six villages together?
A. 55%
B. 53%
C. 51%
D. Cannot be determined.
E. None of these

68. What is the ratio between numbers of illiterate people from villages B, C & D to number of females from villages A, E & F?
A. 320:527 B. 527:330
C. 330:527 D. 527:320
E. None of these

69. If 3% of female from village D & 5% of female from village E are literate then what is the total number of literate males from D & F together?
A. 1823
B. 1723
C. 1623
D. Cannot be determined
E. None of these

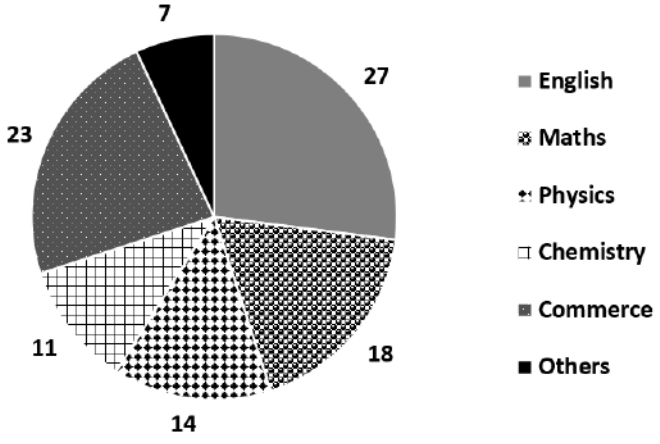
70. The number of females from villages A & C is how much percentage more or less than number of females from villages D & F?
A. 24.76% B. 24.72%
C. 25.76% D. 25.72%
E. None of these

Directions (71-75):

Following Pie charts represent the number of students, who have appeared and cleared phase I of Civil Service Exam from various departments of an Arts and Science College.

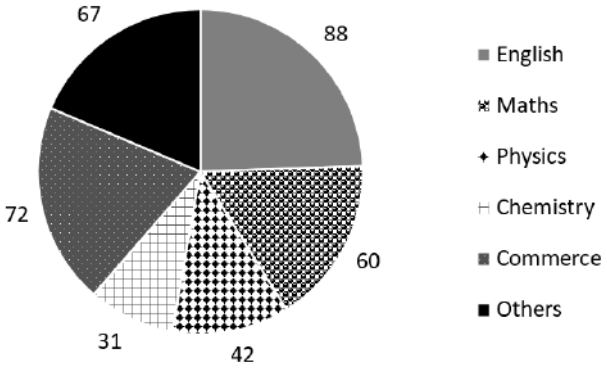
Total number of students who appeared for civil services exam=54,840

% of students appeared from various departments



Total number of students who cleared phase I of civil services exam= 8,470

Degree of students cleared from various departments



71. Approximately what is the difference between the number of students cleared phase I from Maths department and number of students appeared from English department?
A. 13500 B. 12395
C. 13395 D. 12500
E. None of these

72. The total number of students clearing phase I from commerce and other department is what percentage of the number of students clearing phase I from physics department?
A. 340% B. 310%
C. 325% D. 331%
E. None of these

73. What has the ratio between numbers of students appeared from Maths and physics departments to the number of students appeared from chemistry and commerce departments?
A. 16:15 B. 15:17
C. 16:17 D. 15:16
E. None of these

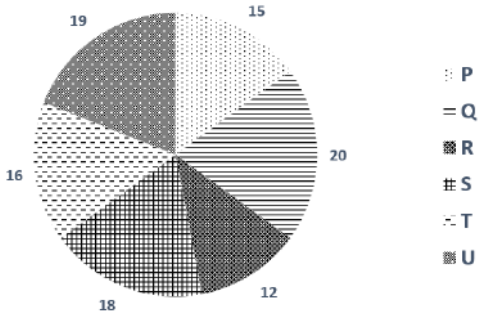
74. From which department is the difference between the number of students cleared and the number of students appeared is the second minimum?
A. Chemistry B. Physics
C. Commerce D. Maths
E. None of these

75. What is the percentage of students who did not clear the phase I of the exam?
A. 84.45% B. 84.55%
C. 83.55% D. 83.45%
E. None of these

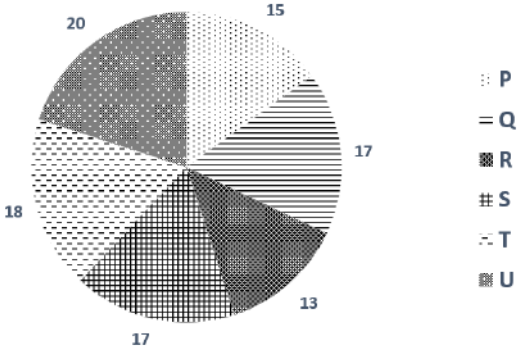
Directions (76-80):

The following pie charts show the total income and the total expenditure of family members. Study the following pie-charts carefully and answer the questions given below:

Total income of Family members = 9,60,000



Total Expenditure = 5,76,000



76. What is the difference between the Income of U and the expenditure of P?
A. 144000 B. 84000
C. 120000 D. 96000
E. 108000

77. What is the ratio of total income of P and Q together and the total expenditure of T and U together?
A. 149:151 B. 123:150
C. 175:114 D. 100:93
E. 114:175

78. Find the total saving of Q and S.
A. 45200 B. 42640
C. 43950 D. 46250
E. None of these

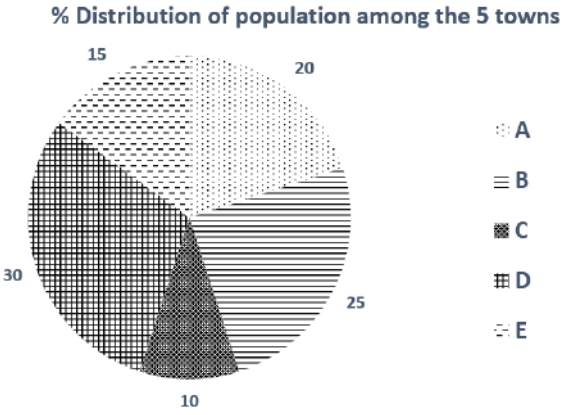
79. Find the average income of P, R and S.
A. 1,44,000 B. 1,80,000
C. 1,15,200 D. 1,05,000
E. 1,20,000

80. If the income of U is increased by 10% and the expenditure increased by 5%. Find the saving.

A. 80000 B. 81250
C. 79680 D. 79545
E. 78954

Directions (81-85): Study the given Pie Chart and answer the given questions based on it.

The population of 5 towns is recorded in the pie chart given below.



Total population of the 5 towns is 12,59,000

81. If 60% of the population of town C migrates to town B find the new population of Town B
A. 390290 B. 389290
C. 385290 D. 384290
E. None of the above

82. What is the total population of town A, B, and C
A. 657450 B. 692450
C. 674280 D. 672450
E. None of the above

83. During war town B and C were nuked, 50% of the population was wiped out and of the remaining 30% were fatally injured and the rest of the population migrated to town A. Find the number of people who died and those who were fatally injured.
A. 285423 B. 283523
C. 286423 D. 298753
E. None of the above

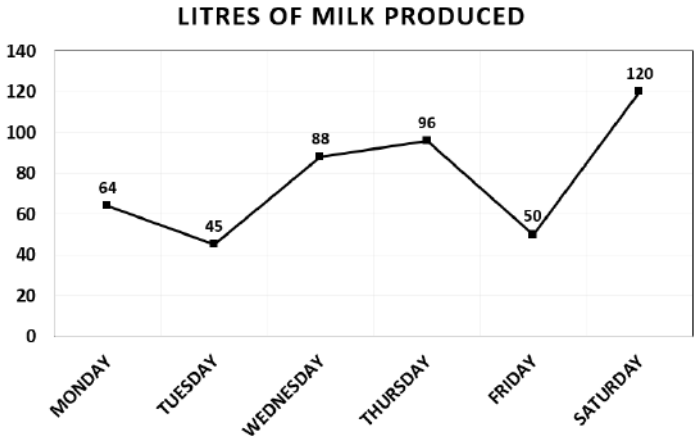
84. During war town B and C were nuked, 50% of the population was wiped out and of the remaining 30% were fatally injured and the rest of the population migrated to town A. Find the new population of A as a percentage of the total population.
A. 33% B. 36%
C. 38.5% D. 32.25%
E. 31.5%

85. If the population of Town A grows at a rate of 15% per year and the rate at which the population of town B grows is 10% per year what will the population of Town A and B be after 2 years.
A. 305005, 380848
B. 333006, 379568
C. 380848, 333006
D. 331520, 384606
E. 333006, 380848

Directions (86-90): Study the given Charts and answer the given questions based on it.

The first chart shows the volume of milk produced every day from Monday through Saturday.

The second pie chart shows the percentage of milk produced that was sold every day.



Day	Milk Sold
Monday	75%
Tuesday	80%
Wednesday	82.5%
Thursday	83.33%
Friday	70%
Saturday	91.67%

86. How many litres of milk was sold from Monday to Saturday
A. 399 L B. 396 L
C. 386 L D. 366 L
E. 369 L

87. The milk that is unsold on a particular day is curdled to form cottage cheese that is sold as a Sunday special. 1.5 litres of milk amounts to 750 grams of cottage cheese.

Find the amount of cottage cheese that is available for sale on Sunday.

A. 38500 gm B. 37500 gm
C. 35000 gm D. 36000 gm
E. None of the above

88. If the sale on Sunday is 54 times the sale of milk throughout the rest of the week. Then find the sale of milk for the whole week.

A. 890 L B. 876 L
C. 823 L D. 866 L
E. None of the above

89. If the milk that is unsold at the end of the day is used to make packaged flavoured milk. And 1 litre of unsold milk amounts to 1.25 litres of flavoured milk, find the amount of flavoured milk that is produced from Monday to Saturday.

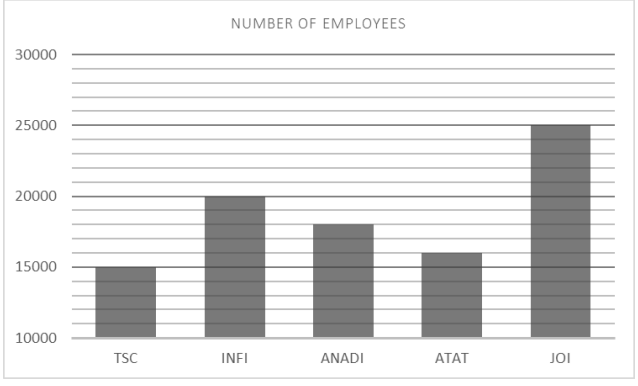
A. 97.25 L B. 96.25 L
C. 89.75 L D. 96.75 L
E. None of the above

90. How many litres of the milk was unsold through the week as a percentage of the total milk produced.

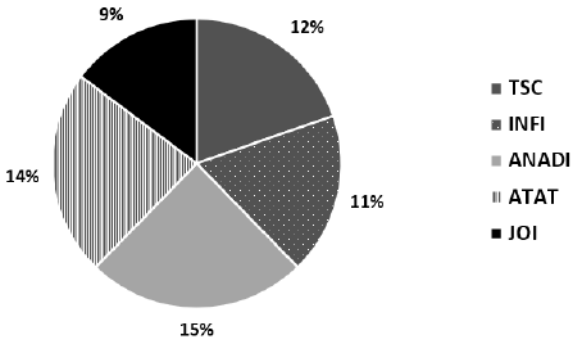
A. 16.66%
B. 15.97%
C. 17.63%
D. None of the above
E. More than one of the above

Directions (91-95): Study the given Charts and answer the given questions based on it.

There are two types of employees in TSC, INFI, ANADI, ATAT, JOI. The first being an officer the second being a worker.



Percentage of employees that are officers



91. Find the number of officers in all the companies.

A. 12000 B. 11490
C. 13390 D. 12550
E. 11190

92. What is the number of workers in all of the companies' combined?

A. 82810 B. 81810
C. 90810 D. 80810
E. 82880

93. Out of the total employees in ATAT if 46% are females. Find the number of Female officers. Consider the distribution to be uniform. (approx.)

A. 1000 B. 1010
C. 1020 D. 1030
E. 1040

94. If 50% of the officers are females and 7.5% of the workers are females. Find the number of females in JOI and ANADI (approx..)

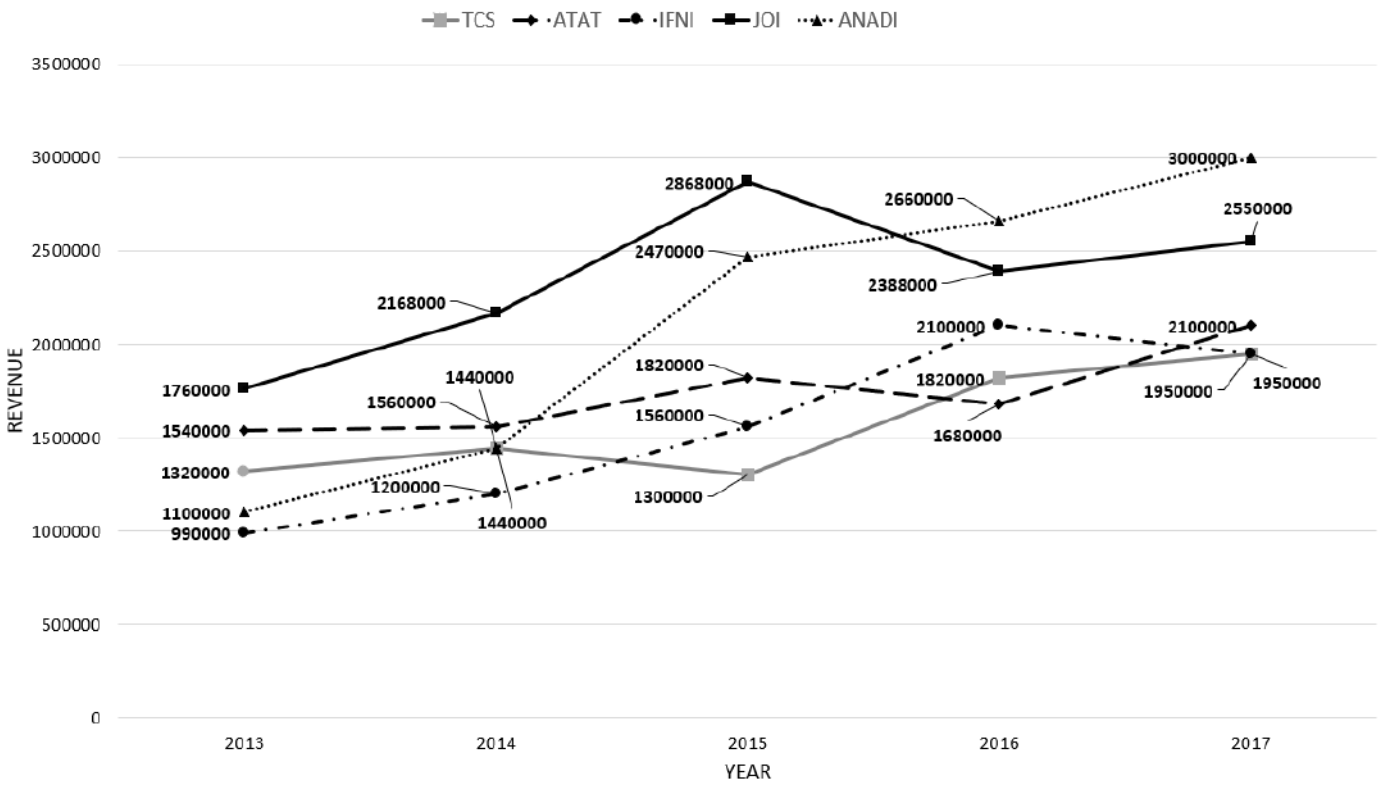
A. 5300 B. 5329
C. 5320 D. 5335
E. 5340

95. Due to recession INFI lays off 25% of its workers (non-officers) and 45% of its officers. Find the number of employees laid off by INFI

A. 5550 B. 5340
C. 5540 D. 5450
E. None of the above

Directions (96-100): Study the given Line Chart and answer the given questions based on it.

The following line graph represents the revenues of 5 Indian companies from 2013-2017. Answer the following questions based on the data provided



96. What is the total revenue earned by ATAT during the course of these 5 years?
    A. 87,00,000 B. 88,00,000
    C. 86,00,000 D. 85,00,000
    E. None of the above
97. If the losses incurred by IFNI in 2013 are 0.25 times its revenue. Find the expenses of IFNI in 2013
    A. INR 125000 B. INR 1275000
    C. INR 1262500 D. INR 1235000
    E. INR 1237500
98. If the total expenses of ANADI during the time period is INR 50,00,000 then find the profit/loss made by the company in five years.
    A. 56,66,000 B. 56,70,000
    C. 56,60,000 D. 55,60,000
    E. None of the above
99. If TCS and ATAT decide on merging their businesses. Then what will their revenue be for the term 2015-17
    A. 10,600,000 B. 10,630,000
    C. 10,603,000 D. 10,670,000
    E. None of the above
100. What is the total revenue of ANADI over the 5 years?
    A. 1,067,000 B. 1,607,000
    C. 1,060,700 D. 1,706,000
    E. None of the above

ANSWER KEY:

1) C	21) D	41) B	61) B	81) A
2) D	22) B	42) A	62) E	82) B
3) A	23) C	43) D	63) A	83) C
4) B	24) A	44) E	64) A	84) D
5) E	25) E	45) C	65) E	85) E
6) E	26) E	46) C	66) C	86) C
7) D	27) B	47) A	67) B	87) A
8) C	28) C	48) C	68) C	88) E
9) B	29) D	49) E	69) D	89) B
10) A	30) E	50) B	70) A	90) D
11) C	31) C	51) C	71) C	91) E
12) C	32) E	52) D	72) D	92) A
13) B	33) A	53) E	73) C	93) D
14) A	34) D	54) A	74) A	94) B
15) D	35) C	55) B	75) B	95) C
16) C	36) B	56) C	76) D	96) A
17) B	37) A	57) A	77) C	97) E
18) A	38) D	58) D	78) E	98) B
19) B	39) A	59) B	79) A	99) D
20) A	40) C	60) E	80) C	100) A

DI: CASELETS

Directions: (1 – 5): Study the given information carefully to answer the questions.

Ninad goes to a hill station by car. While going upwards (uphill) the consumption of petrol was increased by 25% of the normal consumption of petrol but while going downwards (downhill) the consumption of petrol was decreased by 50% of the normal consumption of petrol. He goes from the point P to the point Q. The total distance between point P and point Q is 525 km in which the total distance travelled by him uphill is 2.5 times of the total distance travelled by him downhill and the total distance travelled by him on the plane surface is 140 km. While coming back from the point Q to point P, he saves 15 litres of petrol and the consumption of petrol is normal on plane surface.

1. What is the mileage of the car on downhill?
   A. 1 liter per 10 kilometers
   B. 1 liter per 15 kilometers
   C. 1 liter per 17.5 kilometers
   D. 1 liter per 15.5 kilometers
   E. None of these
2. If point P to point Q were a plane surface, then how many liters of petrol he would have consumed more while going and coming back?
   A. 12 liters B. 18.33 liters
   C. 15.33 liters D. 11.67 liters
   E. 12.67 liters
3. The quantity (in liters) of petrol consumed for the entire journey (from point P to point Q and from point Q to point P) is
   A. 114.4 liters B. 145.2 liters
   C. 120.4 liters D. 110.5 liters
   E. 115.6 liters
4. If the speed of car is 55 km per hour on the plane surface and while going uphill, the car's speed was decreased by 25% of the normal speed and while going downhill the car's speed was increased by 50% of the normal speed then approximately how much time he would have taken during the entire journey? (If he returns immediately from point Q to point P)
   A. 21.90 hours B. 21.10 hours
   C. 19.90 hours D. 19.09 hours
   E. 21.09 hours
5. What is the difference between the mileage of car on downhill and that on uphill?
   A. 1 liter per 11 kilometers
   B. 1 liter per 22 kilometers
   C. 1 liter per 33 kilometers
   D. 1 liter per 10 kilometers
   E. 1 liter per 9 kilometers

Directions (6– 10): Study the given information carefully to answer the questions.

In an amusement park, the following types of traffic signals are there to drive a toy car.

Red Light (R) = Stop

Yellow light (Y) = Wait

Red and Yellow lights (RY) = Turn left

Red and Grey lights (RG) = Turn right

Yellow and Grey lights (YG) = Go at 20 km per hour

Red, Yellow, and grey lights (RYG) = Go at 10 km per hour

Grey light (G) = Go at 5 km per hour

All children driving the cars inside the amusement park should compulsorily follow the traffic signals and can't go outside the park to drive the car. A boy Pratik who is facing north, drive the car at the speed of 30 km per hour inside the park and encounters the signals in the following manners. (He can go to the next signal only after passing the previous signal)

Starting Point = S

After half an hour, 1st signal – RY and YG

After 15 minutes, 2nd signal – RYG

After 30 minutes, 3rd signal – RG and RYG

After 15 minutes, 4th signal – RG and YG

After an hour, 5th signal – RY and G

After 2 hours, 6th signal – R

6. What is the total distance that Pratik travelled from the starting point till the 6th signal?
   A. 57.5 km B. 62.5 km
   C. 55 km D. 52.5 km
   E. None of these
7. What is the average speed at which Pratik travelled from the starting point till the 6th signal?
   A. 11 7/9 km per hour
   B. 12 7/9 km per hour
   C. 11 5/9 km per hour
   D. 12 5/9 km per hour
   E. None of these

8. Suppose, in park there is no signals then how much less time Pratik would have taken to reach the final position?
   A. 3 hours 58 minutes
   B. 3 hours 12 minutes
   C. 2 hours 12 minutes
   D. 3 hours 32 minutes
   E. 4 hours 5 minutes
9. If at the starting point, Pratik was facing toward south then what would be the final position from the starting point?
   A. 27.5 km towards south and 10 km towards east
   B. 17.5 km towards south and 12.5 km towards east
   C. 27.5 km towards north and 10 km towards west
   D. 27.5 km towards south and 10 km towards east
   E. 17.5 km towards north and 10 km towards east
10. After the starting point, if the first signal was RG and RYG instead of RY and YG then what would be the final position of Pratik from the starting point?
   A. 17.5 km towards west and 10 km towards north
   B. 12.5 km towards east and 2.5 km towards south
   C. 12.5 km towards west and 10 km towards north
   D. 12.5 km towards west and 2.5 km towards north
   E. 17.5 km towards east and 10 km towards south

Directions: (11- 15)

Study the given information carefully to answer the questions.

Every year, a survey of 10000 people is conducted by the World Health Organization (WHO). WHO found that in the year 2000, 2001, 2002, 2003 and 2004 the percentage of people affected by malaria were 30%, 40%, 30%, 20% and 45% respectively. WHO also found that every year out of the affected people 60% were students, 10% were employees and 30% were labourers. The number of employees, students and labourers were in the ratio 20: 11: 9, every year.

11. In the year 2002, find the number of employees affected by malaria?
   A. 500 B. 600
   C. 300 D. 1500
   E. 1100
12. In the year 2004, find the number of laborers who were not affected by malaria?
   A. 4100 B. 1250
   C. 1150 D. 900
   E. 1900
13. What is the difference in the number of students affected and not affected by malaria in the year 2001?
   A. 2000 B. 350
   C. 2050 D. 2400
   E. 4200
14. Find the ratio of the number of employees affected by malaria in the year 2000 to that affected by malaria in the year 2003.
   A. 5: 3 B. 3: 2
   C. 9: 4 D. 2: 1
   E. 4: 3
15. Which year had the maximum number of students not affected by malaria?
   A. 2000 B. 2001
   C. 2002 D. 2003
   E. 2004

Direction (16- 20): Read the information carefully and answer the following questions.

A Businessman sold two types of product Chair and Table on four different months January, February, March and January. Total products sold in March is 1800 which is 25% more than total products sold in January. Ratio of number of Chairs and Tables sold in month of January is in ratio of 5:3. Number of tables sold in April is 120 less than number of chairs sold in February. Number of tables sold in January and number of chairs sold in April is in ratio of 3:2 respectively. Number of tables sold in March is 300 more than chair in same month and number of tables sold in month of February is 33.333% less than chair in the same month. Total products sold in January is 50% more than that sold in April.

16. Find the total number of Chair sold in all the months.
   A. 2820 B. 2730
   C. 2620 D. 2550
   E. None of these
17. Find ratio of Table sold in January to Chair sold in February respectively.
   A. 3:4 B. 2:3
   C. 4:3 D. 5:6
   E. None of these
18. Total number of Chairs sold in month of March is how much percentage of total number of Tables sold in April.
   A. 80% B. 100%
   C. 120% D. 75%

E. None of these

19. Total number of Chairs sold in April is how much percentage more or less than the total number of Tables sold in February.
A. 33.333% B. 20%
C. 15% D. 25%
E. None of these

20. Find the difference between total number of chairs and table sold in all months together.
A. 70 B. 80
C. 60 D. 40
E. 20

Directions: (21 – 25)

Study the following information carefully and answer the following questions:

I. A multinational company has 4000 workers. The ratio of men to women is 3: 2. All the workers are involved in five different departments, viz IT, HR, Finance, Marketing and Logistics.

II. 16% of the men and 28% of the women are in Finance and IT respectively. One-fifth of the men are in Logistics department. The ratio of women to men in Finance is 2: 3.

III. 25% of the total number of workers are in HR competition. Women in Logistics are 60% of the men in the same department. 22% of the women are in Marketing. The remaining women are in HR. 18% of the men are in IT and the remaining in Marketing.

21. Which department has the maximum number men in the company?
A. HR B. Finance
C. Logistics D. Marketing
E. IT

22. What is the number of women in HR competition?
A. 288 B. 256
C. 384 D. 448
E. None of these

23. The number of men in Logistics forms what percent of the number of women in the same department? (Rounded off to two digits after decimal)
A. 160% B. $156\frac{2}{3}\%$
C. $96\frac{2}{3}\%$ D. $166\frac{2}{3}\%$
E. None of these

24. The number of women in Marketing forms what per cent of the total number of the workers in the company? A
A. 8.6% B. 8.8%
C. 9.8% D. 4.4%
E. None of these

25. What is the total number of men in Finance and HR together?
A. 512 B. 744
C. 792 D. 1200
E. 1128

Directions: (26 -30)

Study the following information carefully and answer the questions given beside.

Sachin Tendulkar scored runs against different countries in three different years.

NOTE: Total runs scored in a year= Australia + England + Others

2011: The total runs scored in 2011 were 1800. The runs scored against England were 1/3rd of the runs against Others in 2012. The average runs scored against Australia and England was 450.

2012: The total runs scored against Australia and Others was 1800. The ratio of the total runs scored against Others in 2011 to that of the total runs scored against Others in 2012 is 4:3. The total runs scored against England in 2012 were equal to the total runs scored against England in 2013.

2013: The sum of the total runs scored against Australia and England is equal to the total runs scored against Others. The total runs scored in 2013 were 2100. The total runs scored against Australia were twice of the runs scored against England in 2011

26. What were the total runs scored in 2012?
A. 2100 B. 2500
C. 2600 D. 2400
E. 2000

27. What is the sum of the runs scored against England in all three years?
A. 900 B. 1550
C. 1425 D. 1050
E. 1100

28. What is the ratio of the total runs scored against Australia in 2011 to that of the total runs scored against England in 2013?
A. 7: 9 B. 9: 8
C. 11: 7 D. 9: 7
E. 11: 13

29. What is the difference between the total runs scored against Others in 2011 to the total runs scored against Others in 2012?
A. 225 B. 200
C. 210 D. 300
E. 250

30. The total runs scored against Australia in 2012 is what percentage of the total runs scored against Australia in 2013?
A. 125% B. 100%
C. 150% D. 200%
E. 250%

Directions (31– 35)

Study the following information carefully and answer the questions given beside.

Out of 200 people who participated in a sports event, 100 participated in Cricket, 120 participated in Football, 80 participated in basketball and 10 Participated in none of these three. 100 people had participated in exactly one of three events.

31. How many people had participated in exactly two of the three events?
A. 98 B. 85
C. 70 D. 80
E. 110

32. If 20 people had only participated in football and cricket, then how many people had only participated in basketball?
A. 20 B. 12
C. 25 D. 18
E. 10

33. If 15 people who had only participated in football, participated in basketball also and 5 people who only participated in cricket and football also, then how many people had participated in at least two of the three events?
A. 88 B. 105
C. 98 D. 119
E. 135

34. If 30 people only played cricket, then how many people played at least one of basketball or football but not cricket?
A. 98 B. 95
C. 87 D. 90
E. 105

35. What is the maximum possible number of people who participated only in football?
A. 118 B. 87
C. 90 D. 120
E. 130

Directions: (36 – 40)

Study the following information carefully and answer the questions given beside.

The information given below is the investment of three Venture capitalists in a partnership for the period of 2001 – 2005.

The investments made by an individual are for the same period. The investment of Binod in 2001 is Rs. 60000 and is equal is to the investment of Chirag in 2003. The total investment in 2004 is Rs. 36000 and the ratio of investments of Arun, Binod and Chirag is 8: 9: 7 respectively. The investments of Arun in 2001, 2002 and 2003 are Rs. 48000, Rs. 72000 and Rs. 66000 respectively. The investment of Chirag in 2001 and 2002 are same i.e., Rs. 33000. The investment of Binod in 2003 is Rs. 9000 more than the investment by him in 2002 i.e., Rs. 45000.

36. Find the share of profit earned by Binod in the year 2003, if the total profit in 2003 is Rs. 22500?
A. Rs. 6250 B. Rs. 6450
C. Rs. 6750 D. Rs. 6400
E. Rs. 6600

37. Suppose all the VCs invested for one more year i.e., 2005 and the total investment of Arun and Binod is Rs. 84000 and invested their amounts for 24 and 16 months respectively, find for how many months Chirag invested his amount of Rs. 96,000? [Given profits of Arun, Binod and Chirag are Rs. 18900, Rs. 16800 and Rs. 25200 respectively]
A. 12 months B. 21 months
C. 15 months D. 6 months
E. 16 months

38. If the share of profit of Chirag in 2001 and 2002 is Rs. 11550 and Rs. 13200 respectively, find the ratio of profit of Arun in 2001 to that in 2002?
A. 1: 2 B. 7: 12
C. 12: 7 D. 5: 7
E. 3: 4

39. If the amount of profit shared by Arun and Binod in 2004 is Rs. 6000 and Rs. 6750 respectively and Chirag makes $3/4^{th}$ of the profit in 2005 as compared to his profit in 2004. Find the amount of Profit shared by Chirag in 2005?

A. Rs. 3625 B. Rs. 3500
C. Rs. 3937.5 D. Rs. 3500.5
E. Rs. 4225

40. The profit earned by Binod in 2006 is 8% of the investment made by Binod in 2002 and the profit of Chirag in 2006 is 10% of the investment made by Chirag in 2002. Find the ratio of profit of Chirag in 2006 to that of Binod in 2006.
A. 12: 11 B. 11: 12
C. 1: 12 D. 15: 11
E. None of these

Directions: (41 – 45)

Study the following information carefully and answer the questions given beside.

There are 2800 students in IIT University in the academic year 2020. The ratio of the boys to the girls in the University is 4: 3. All the students are enrolled in different sport activities (Cricket, Football, Volleyball, Hockey and Basketball) and one student is enrolled in only one sport activity. The number of boys enrolled in the Hockey is 306. The ratio of the number of boys who enrolled in Cricket to the number of boys who enrolled in Football is 72: 89. 32% of the students are enrolled in Basketball. The number of boys enrolled in Volleyball is 12.5% to the total number of boys. The number of girls enrolled in Basketball is 285 which is 75 less than the number of girls enrolled in Football. The number of girls enrolled in Cricket is 93 more than the number of boys enrolled in the same activity. The total number of students enrolled in Hockey is 408.

41. The difference in the number of boys and girls who are enrolled in Hockey is what percentage of the total number of students who are enrolled in Volleyball?
A. 45% B. 57%
C. 63% D. 59%
E. 67%

42. Find the percentage of students of the university who are enrolled in Cricket.
A. 18.75% B. 24%
C. 22.25% D. 20.75%
E. 17.25%

43. Find the ratio of the number of boys enrolled in Football to the number of girls enrolled in the same activity.
A. 7: 11 B. 89: 120
C. 117: 139 D. 57: 71
E. None of these

44. The total number of girls in Basketball is what percentage of the total number of students in Basketball?
A. 22% B. 28%
C. 36% D. 39%
E. 32%

45. Find the number of girls who are enrolled in Volleyball.
A. 104 B. 288
C. 144 D. 172
E. 154

Directions: (46– 50)

Study the following information carefully and answer the questions given beside.

Three online car booking website X, Y and Z listed some cars on their websites. The all listed 3-star, 4 star and 5-star cars. One car can be listed on exactly one website.

Further it is known that

(I) Total number of cars listed on all three websites together is 1080.

(II) Total number of 4-star cars is twice the total number of 3-star cars on all the three websites taken together. Further, total number of 5-star cars is thrice the total number of 4-star cars on all three sites together.

(III) Out of 300 cars listed on Websites X, 30% are 3-star cars.

(IV) Ratio of 5-star cars on sites X, Y and Z are 1: 1: 2.

(V) Number of 5-star cars on Y website is 20% more than number of 4-star cars on the same website.

(VI) Number of 3-star cars on website Y and Z are same.

46. What is the total number of 4-star cars from website X and Z together?
A. 100 B. 70
C. 80 D. 60
E. 50

47. What is the difference between 3-star cars on site X- and 4-star cars on site Z?
A. 20 B. 10
C. 30 D. 50
E. 80

48. 4 Star Cars on Site Y is what percent of total number Z are on Site X?
A. 25% B. 75%
C. 80% D. 20%
E. 50%

49. What is the total number of Cars listed on Website Z?
    A. 490 B. 430
    C. 400 D. 390
    E. None of these
50. Website D also started listing of Cars on their site. Number of 3-star cars on site D is 50% more than number of 4-star cars on site X. Total number of cars (3-star, 4 star and 5 star) on site D are 500, out of which 50% are 4 stars. Find the number of 5-star cars listed on site D.
    A. 330 B. 350
    C. 290 D. 390
    E. None of these

Directions: (51-55)

Study the given information carefully to answer the questions.

One day, in an HDFC Branch the Attendance of all the employees was 100% but all the employees were not punctual to the office nor did all the employees stayed till the end of the office time. On that day, of all the employees who arrived early at the office, 20% of them left early but 40% of them left late and rest of them left on time. Of the employees who arrived late at the office, 50% of them left late but 25% of them left on time and rest of them left early. Of the employees who arrived on time, 37.5% of them left early and an equal number of them left late but rest of them left on time. The number of employees who arrived early was equal to the number of employees who left on time and the number of employees who left early was 78 more than the number of employees who arrived late at the office. The number of employees who didn't leave on time was 288.

51. What is the difference between the total number of employees who left early and the total number of employees who left late?
    A. 44 B. 32
    C. 40 D. 36
    E. None of these
52. What is the total number of employees working in that branch?
    A. 408 B. 424
    C. 416 D. 412
    E. None of these
53. Find the respective ratio of the number of employees who arrived early, the number of employees who arrived on time, and the number of employees who arrived late?
    A.10: 9: 8 B. 5: 8: 4
    C. 5: 10: 2 D. 5: 8: 5
    E. None of these
54. Suppose on the day before yesterday of that day 25% of the total number of employees was on leave on the medical ground and 33.33% of the remaining was on leave for personal reason then how many employees was present on the day before yesterday of that day?
    A. 102 B. 204
    C. 238 D. 130
    E. None of these
55. The total number of employees who left on time was how much percent more than/less than the total number employees who didn't leave on time?
    A. 75% B. 80%
    C. 58.33% D. 58.50%
    E. 75.50%

Directions: (56 – 60)

Study the given information carefully to answer the questions.

In ecommerce industry, the growth of the industry is driven by the increase in the number of people buying online and the increase in the number of people selling online. In 2011, it was expected that total 150 million people would buy products online in India that would be 20% of the total population of India and 2% of the total population of India would sell products online. If in 2012, the population of India was increased by 10% over the previous year together with the total number of people who bought products online was increased by 20% over the previous year and the number of sellers remained constant then in the year 2012 the industry revenue was $ 75 billion.

56. In 2011, what was the total number of people from India who sold the products online?
    A. 1.5 million B. 15 million
    C. 50 million D. 10 million
    E. None of these
57. If the revenue per seller was same in 2011 as compared to 2012 then what was the revenue per seller (in $) in 2011? (One billion is equal to 1000 millions)
    A. 50 million B. 500 million
    C. 7.5 billion D. 7.5 million
    E. None of these

58. If in 2013, the number of people who will buy products online will be increased by 30% over the previous year then in 2013, total how many people in million will buy product online?
A. 234 B. 256
C. 232 D. 250
E. None of these

59. In 2013, the population of India was 1350 million then what was the percentage growth of India over the period 2011 to 2013?
A. 60% B. 40%
C. 70% D. 30%
E. None of these

60. It is assumed that in 2013, because of JIO, 40% of the total population of India will buy products online. If in 2013, the population of India was increased by 5% over previous year then in 2013, total how many people will buy product in India?
A. 346.5 million B. 343 million
C. 339 million D. 333.5 million
E. None of these

Direction (61-65):

Study the following information carefully and answer the questions given below.

Total number of people in the Colony is 8000 and each of them live four different colours of flats – Red, Black, Grey and Purple. Total number of people live grey flat is 2200. Number of males who live in red flat is 55% of the total number of people in the Colony who live in red flat. The ratio of the number of males to females live in purple flat on the colony is 4:5. The ratio of the number of males who live in Black flat to purple flat is 3:2. Number of males who live grey flat is 20% more than the number of females who live purple flat. The ratio of the number of people who live Red and Black colour flat in the ratio of 2:3 and the ratio of the number of people live Black to Purple colour flat is 4:3.

61. What is the difference between the number of females who live in grey flat and the number of males who live in red flat?
A. 130 B. 150
C. 120 D. 170
E. 115

62. What is the total number of females who live in the colony?
A. 3820 B. 3850
C. 3870 D. 3920
E. 3960

63. The number of males who lives in purple flat is approximately what percent of the total number of people who live in Black flat?
A. 29% B. 33%
C. 31% D. 35%
E. 37%

64. The total number of males who live in the colony is approximately what percent of the total number of people who live in the colony?
A. 48% B. 50%
C. 53% D. 55%
E. None of these

65. What is the ratio of the number of females who live in red flat to the number of females who live in Black flat?
A. 3:5 B. 4:5
C. 7:6 D. 5:6
E. None of these

Directions: (66 – 70)

Study the following information carefully and answer the questions given beside:

There are five HINDU temples in five different cities of India; Vrindavan, Ahmedabad, Srirangan, Baroda and Puri. The total number of HINDU devotees in the cities are 18000. The strength of Vrindavan temple is 20% and that of Ahmedabad is 35% of the total devotees of the cities. Baroda and Puri have equal strength. 30% of the devotees of Vrindavan know only Sanskrit. 40% devotees of temple in Baroda know only Hindi. There are 20 more devotees in Ahmedabad temple who know only Hindi than the number of devotees of Baroda temple who know only Hindi. The strength of Srirangan temple is 50% that of temple Vrindavan. Two-fifths of devotees of Ahmedabad temple know both the languages. 40% devotees of Vrindavan temple know both languages.

50% devotees of Srirangan temple know only Hindi and the number of devotees of Srirangan temple who know both the languages is equal to the number of devotees who know only Sanskrit. The number of devotees who know only Sanskrit from Puri temple is equal to the number of devotees who know only Hindi from Baroda temple.

The number of devotees who know only Hindi from Puri temple is 80 more than the number of devotees who know only Hindi from Srirangan temple. The number of devotees of

Baroda temple who know only Sanskrit is 90 more than the number of devotees who know both the languages from Puri temple. Each devotee knows at least one of the two languages. Sanskrit and Hindi.

66. What is the percentage of the number of HINDU devotees who know both the languages?
A. 24.5% B. 28.5%
C. 34.5% D. 36.5%
E. None of these

67. What is the difference between the number of HINDU devotees who know Sanskrit and those who know only Hindi?
A. 6500 B. 7000
C. 6000 D. 7500
E. None of these

68. The number of Puri HINDU temple devotees who know only Sanskrit language is how many times of those who know both the languages from Vrindavan temple?
A. 2 times B. 0.5 times
C. 2.58 times D. 0.875 times
E. None of these

69. What is the ratio of the total number of devotees who know both the languages from temple Vrindavan and temple Srirangan together to the total number of devotees from temple Baroda?
A. 2: 1 B. 4: 5
C. 4: 3 D. 3: 2
E. None of these

70. Which temple has the maximum difference between the number of devotees who know only Sanskrit and only Hindi?
A. Vrindavan B. Puri
C. Srirangan D. Ahmedabad
E. Baroda

Directions: (71 – 75)

Study the following information carefully and answer the questions given beside.

Three friends, Rohan, Roshani, and Ritika went to a shopping centre. Each of them had Rs. 5000. In the shopping centre, the session sale discount was 10% on the market price. Roshani and Ritika were regular customers, so they got 20% each an additional discount on the discounted price but Rohan being a new customer didn't get any additional discount. Only Ritika had a membership card of the shopping centre which gave an additional discount of 25% on the discounted price. They all like Mixers of xyz brand and they purchased one piece each of that brand. The marked price of each piece was same. In last, when they calculated then they found that Roshani had paid Rs. 720 more than that of Ritika.

71. If all of them combine the money paid for Mixer then, the total money paid by them for three pieces of the mixers was what percentage of the total marked price of the three mixers?
A. 72% B. 62%
C. 78% D. 68%
E. None of these

72. The amount paid by Rohan for the mixer was how much more than that by Ritika?
A. 45% B. 50%
C. 55.33% D. 66.67%
E. None of these

73. What is the ratio of the amount paid by Rohan to that by Ritika?
A. 9: 7 B. 5: 3
C. 6: 5 D. 5: 4
E. None of these

74. How much money was left with Rohan after purchasing the mixer?
A. Rs. 1900 B. Rs. 1500
C. Rs. 1700 D. Rs. 1400
E. None of these

75. What was the marked price of the mixer?
A. Rs. 3800 B. Rs. 4400
C. Rs. 4100 D. Rs. 4150
E. None of these

Directions: (76– 80)

Study the following information carefully and answer the questions given beside:

At a place there are 600 followers of three SUPERSTARs – Superstar1, Superstar2 and Superstar3, the number of male followers and the number of female followers is in the ratio of 7: 5. Each follower follows at least one of these Superstars. 10% of male followers follow Superstar1 only, 20% follow Superstar2 only and 12% follow Superstar3 only. 10% follow only Superstar1 and Superstar3. 18% follow only Superstar3 and Superstar2 and 20% follow only Superstar1 and Superstar2. The remaining male followers follow all the Superstars. 18% of female followers follow Superstar1 only. 10% follow only Superstar2 only and 12% follow Superstar3 only. 20% follow only Superstar1 and Superstar3, 12% follow only Superstar3 and Superstar2 and 8%

follow only Superstar1 and Superstar2. The remaining female followers follow all three Superstars.

76. What is the ratio of the number of male followers who follow Superstar2 to the number of female followers who follow Superstar1?
A. 231: 161 B. 238: 165
C. 170: 61 D. 7: 5
E. None of these

77. The total number of male followers following less than two Superstars is what percent of the total number of female followers following more than one Superstar?
A. 98 B. 79
C. 92 D. $66\frac{2}{3}$
E. Other than the given options

78. What is the ratio of the total number of female followers who follow all the Superstars to the total number of male followers who follow all three Superstars?
A. 10: 9 B. 25: 9
C. 29: 14 D. 10: 7
E. 14: 9

79. The number of female followers following Superstar3 only is approximately what per cent less than the number of male followers following Superstar1 only?
A. 6 B. 14
C. 80 D. 42
E. None of these

80. The number of male followers following only Superstar2 is what per cent of the number of female followers who follow only Superstar3 and only Superstar1
A. $98\frac{2}{3}\%$ B. $83\frac{1}{3}\%$
C. $66\frac{1}{3}\%$ D. $97\frac{1}{3}\%$
E. $93\frac{1}{3}\%$

Directions: (81-85)

Study the following information carefully and answer the questions given beside.

The census officers provided the data regarding changes in population of three major towns for three years. Population of town P was 135450 in the third year and it increased 5% and 7.5% in second and third year respectively. Population of town Q increased by 25% in second year and in the second year it was equal to 150% of the population of town P in first year. After taking population control measures, town Q succeeds in controlling population as growth rate in third year was half of that of previous year. The area of town R is 1250 km^2 and population density for second year was 250. Growth rate for town R was 11.11% and 10% for second and third year respectively.

Note: Population density is calculated as Total population ÷ Total area.

81. Population of town Q in third year exceed by how much compare to population of town P in second year?
A. 76500 B. 105500
C. 80500 D. 72000
E. None of these

82. The average population of town Q for three years forms what percentage of average population of town R for three years?
A. 53.15% B. 54.88%
C. 58.44% D. 56.16%
E. None of these

83. For town Q, male to female ratio for the last two years was 7: 5 and literate male and illiterate male are in the ratio of 4: 1 for same years. Find the ratio between illiterate male in second year and literate male in third year.
A. 8: 9 B. 4: 9
C. 9: 2 D. 7: 9
E. 2: 9

84. Refer the data provided in previous question, by what percentage the number of illiterate males in third year for town Q less than female in third year for town Q?
A. 73.5% B. 72%
C. 69% D. 70.50%
E. 74.25%

85. For the third year, if 3/8th part of population of P town are not above 20 years old, 33% of population of Q town are below 20 years old and 70% of population of R town are above 20 years old, how much population of three towns are above 20 years for third year?
A. 430440 B. 445400
C. 443300 D. 460281
E. Can't be determined

Directions: (86 – 90)

Study the following information carefully and answer the questions given beside.

Honda (A Car manufacturing company) manufactured only two brands of cars A and B in the year 2020. In the year 2021, it introduced a new brand of car C. The number of cars of brands A and that of brand B manufactured in the year 2020 was in the ratio of 4: 5 respectively. The number of cars of brand A manufactured in the year 2020 to that in the year 2021 was in the ratio of 3: 2 and the number of cars of brand B manufactured in the year 2020 to that in the year 2021 was in the ratio of 3: 4. Further, the total number of cars manufactured in the year 2021 of brand C forms 30% of the total number of cars manufactured in the year 2021

86. In the year 2020, total 1800 cars of brand A were manufactured then find the total number of cars of brand C manufactured in the year 2021?
A. 1800 B. 2100
C. 2700 D. 2400
E. None of these

87. What is the percentage increase in the total number of cars of all the brands manufactured in the year 2021when compared to the total number of cars of both the brands manufactured in the year 2020? (approximately)
A. 45% B. 52%
C. 46% D. 56%
E. None of these

88. In the next year i.e., in the year 2022, Honda wants to increase its car manufacturing capacity by 25% compared to the previous year but it doesn't want to make any changes in the number of cars manufactured in the previous year of any brands therefore it introduced a new brand D. Suppose Honda had manufactured total number of 900 cars of brand C in the year 2021, then in the year 2022 how many cars of brand D should it manufacture?
A. 825 B. 750
C. 725 D. 850
E. None of these

89. If in the year 2021, total 7000 cars were manufactured but the total number of cars manufactured in the year 2021 of brand C forms only 4% instead of 30% then find total how many cars of brand A were manufactured in the years 2020 and 2021 together?
A. 5200 B. 4200
C. 4650 D. 4800
E. None of these

90. If in the year 2021, 900 cars of brand B was manufactured then find the sum of the total number of cars of all the brands manufactured in the year 2020 and 2021 together?
A. 2995 B. 3250
C. 3015 D. 2775
E. None of these

Directions: (91 – 95)

Study the following information carefully and answer the questions given beside.

There are five Workers of different capacities – W1, W2, W3, W4 and W5.

W1: He takes 10 minutes to complete the 20% of the work.
W2: He takes 15 minutes to complete the 10% of the work.
W3: He takes 45 minutes to complete the 15% of the work.
W4: He takes 30 minutes to complete the 30% of the work.
W5: He takes 35 minutes to complete the 25% of the work.

91. A work is done by 3 workers. W1 and W2 complete the work and W3 destroy it. The 3rd worker takes 60 minutes to destroy 75% of the work. All the 3 workers start working in the beginning. After 14 minutes, 3rd worker left the work. In how much time, will the rest of the work be completed?
A. 45.0312 minutes B. 15.125 minutes
C. 30.0625 minutes D. 60 minutes
E. None of these

92. Workers W3 and W4 are completing the work while a 3rd worker can destroy the full work in 50 minutes. W3 and W4 work for 10 minutes in the beginning and then 3rd worker starts destroying. In how much time will the work be destroyed?
A. 21 minutes B. 16 minutes
C. 28 minutes D. 20 minutes
E. 25 minutes

93. Workers W1 and W5 are used to complete the work. There is a 3rd worker in the bottom of work to destroy it. If all the three workers start simultaneously, then the work is completed in 50 minutes. In how much time, the 3rd Worker alone can destroy the work?
A. 140 minutes B. 120 minutes

C. 130 minutes D. 60 minutes
E. None of these

94. Two workers W3 and W4 can complete a work and a destroy worker can destroy in 150 minutes. All the 3 workers working together can complete the work in 150 minutes. The capacity of the work is:
A. 180 units B. 250 units
C. 300 units D. 340 units
E. None of these

95. A large work can be completed by two workers W2 and W3. How many minutes will it take to complete the work from destroyed state if W2 is used for half the time and W3 and W2 complete it together for the other half?
A. 60 minutes B. 45 minutes
C. 30 minutes D. 15 minutes
E. None of these

Directions: (96 – 100)

Study the following information carefully and answer the questions given beside.

Mr. Sharma has four kids and all were born on same date of different years. They all have birthday today. Mr. Sharma wants to buy chocolates for all his kids. But he doesn't want to give each kid equal number of chocolates.

He decides to do the following thing:

He will divide the height (in centimetres) by the sum of age number with weight (in kilogram).

He arrives at this formula –

Number of chocolate = height in centimetres/ (weight in kilogram + age)

The number that will come is the number of chocolates that a particular kid gets.

His second youngest kid is twice the age of the youngest kid whose age is one-third the oldest kid. The second oldest kid is six years younger than the oldest kid. Weight of oldest kid is 72 kg which is numerically three times the age of second oldest kid, whose weight is four times the age of second youngest kid. Weight of the youngest kid is 40% less than the second oldest kid. Sum of weight of all four kids is 258 kg.

96. After two years, weight of oldest kid increases 8 kg, second oldest kid by 4 kg, the second youngest kid gains 12 kg and the youngest kid gains 18 kg weight. Ratio of average weight to average age of all the four kids.
A. 70: 2 B. 23: 75
C. 75: 23 D. 27: 70
E. None of these

97. The oldest and second oldest kids get equal number of chocolates. Find the ratio of their heights if both of them got one a half chocolate. (Oldest: second oldest)
A. 50: 49 B. 51: 52
C. 52: 5 D. 49: 50
E. None of these

98. How many total chocolates were distributed if oldest and second oldest got total 6 and the height of youngest is 174 cm while the second youngest is 18 cm shorter than the youngest?
A. 1 B. 9
C. 12 D. 11
E. None of these

99. Mr. Sharma also buys some pens for his kids and he wants to distribute in this way. The kid with highest weight will get half of them, the kid with second highest weight will get half of what left after giving half the pen to the kid with highest weight. The third highest weight kid get half of what left after the first two round of distributions. If last kid gets 2 pens, ratio of weight to the number of pens for the oldest kid?
A. 18: 1 B. 4: 19
C. 1: 18 D. 4: 17
E. None of these

100. After 5 years from this birthday, Mr. Sharma repeats the same method of distributing the chocolates. After five years, his youngest kid has gained 25% weight while the oldest kid has weight twice the youngest kid. He distributes 2 chocolates between youngest and the oldest kid. If their heights are equal then choose the correct option.
A. Youngest kid gets 1.5 chocolates
B. oldest kid gets 1.5 chocolates
C. height of them is 180cm each
D. height of them is more than 200cm each
E. None of these

ANSWER KEY:

1) E	21) A	41) D	61) C	81) A
2) D	22) B	42) A	62) D	82) D
3) E	23) D	43) B	63) B	83) E
4) D	24) B	44) E	64) E	84) B
5) A	25) E	45) C	65) A	85) D
6) A	26) D	46) D	66) C	86) A
7) B	27) C	47) C	67) B	87) E
8) D	28) B	48) E	68) D	88) B
9) C	29) A	49) E	69) E	89) D
10) D	30) E	50) A	70) D	90) C
11) C	31) C	51) D	71) A	91) C
12) D	32) E	52) A	72) D	92) D
13) C	33) B	53) C	73) B	93) A
14) B	34) D	54) B	74) D	94) C
15) D	35) C	55) C	75) E	95) E
16) B	36) C	56) B	76) B	96) C
17) A	37) A	57) C	77) A	97) B
18) E	38) B	58) A	78) D	98) D
19) D	39) C	59) E	79) B	99) A
20) C	40) B	60) A	80) E	100) D

DI: FILL IN THE BLANKS SOLUTIONS

1. **Answer: A**

   Solution

   Required sum $= 9000 \times \frac{100-90}{100} + 8000 \times \frac{75}{100}$

   = 900 + 6000 = 6900

2. **Answer: B**

   Solution

   Required % = $\frac{\left[\frac{8000\times75}{100}\right]}{2750} \times 100$

   $= \frac{6000}{2750} \times 100 \approx 218\%$

3. **Answer: C**

   Solution

   Required average

   = 1/4 × (8000 × $\frac{100-75}{100}$ + 2250 + 9000 × $\frac{100-90}{100}$ + 2750)

   $= 1/4 \times (2000 + 2250 + 900 + 2750)$

   $= 1975$

4. **Answer: D**

   Solution

   Required difference

   $= (10000 - 2250) - 9000 \times \frac{100-90}{100}$

   $= (7750 - 900)$

   $= 6850$

5. **Answer: A**

   Solution

   Required percentage

   = $\frac{12500-2750}{12500} \times 100 = 78\%$

6. **Answer: E**

   Solution

   Number of people in Teaching profession

   = $\frac{30}{100} \times 50000 = 15000$

   Number of people in medical profession

   = $\frac{10}{100} \times 50000 = 5000$

   Required% = 15000/5000 × 100 = 300%

7. **Answer: C**

   Solution

   Total numbers of males in Banking and Medical professions = $\left(50000 \times \frac{20}{100} \times \frac{60}{100}\right)$ + $(50000 \times \frac{10}{100} \times \frac{40}{100})$

   $= 6000 + 2000 = 8000$

   The total number of females in Medical and Banking profession

   = 10% of 60% of 50000 + 20% of 40% of 50000

   = 3000 + 4000

   = 7000

   Required ratio = 8000/7000 = 8 : 7

8. **Answer: C**

   Solution

   Females in Engineering professions

   $= 50000 \times \frac{25}{100} \times \frac{70}{100}$

   $= 1250 \times 7$

   $= 8750$

   Males in Banking profession

   $= 50000 \times \frac{25}{100} \times \frac{60}{100}$

   $= 6000$

   Required% = $\frac{8750}{6000} \times 100 = 145.83\% \sim 146\%$

9. **Answer: C**

   Solution

   Number of males in Banking and Medical

   = 20% of 60% of 50000 + 10% of 40% of 50000 = 6000 + 2000 = 8000

   Number of females in Law and Teaching

   $50000 \times \frac{15}{100} \times \frac{20}{100} + 50000 \times \frac{30}{100} \times \frac{60}{100}$

   $= 10500$

   Required ratio = $\frac{8000}{10500}$ = 16 : 21

10. **Answer: A**

    Solution

    Number of females in Engineering profession = 25% of 70% of 50000 = 8750

    Number of males in Law profession = 15% of 80% of 50000 = 6000

    Required % = $\frac{8750-6000}{6000} \times 100 = \frac{2750}{6000} \times 100$

    $= 45.83\% \sim 46\%$.

11. Answer: B

    Solution

    Nawal Jyothi + Brilliant in 2018 = 1010

    Nawal Jyothi + Brilliant in 2016 = 920

    Difference = 90

12. **Answer: B**

    Solution

    From the table,

    = $\frac{No.of\ students\ appeared}{Total\ no\ of\ students} \times 100$

    = $\frac{450}{720} \times 100 = 62.5\%$

13. **Answer: C**

    Solution

    From the table,

In year 2016 = 350+480+250+280+300 = 1660
In year 2017 = 470+340+450+450+380
= 2090
In year 2018 = 390+480+360+470+320
= 2020

14. **Answer: E**
Solution
From the table,
No of qualified from Viswa Teja in 2018 : No of not qualified from brilliant in 2016 =
390 : 70 = 39 : 7

15. **Answer: B**
Solution
From the table,
In year 2017 from Gyana Vahini,
Percentage = $\frac{380}{420} \times 100 = 90.47\%$

16. **Answer: D**
Solution
Percent of students selected exactly in two companies from college
B = 100-(70) =30%
Therefore 30% of 1500 = 450

17. **Answer: E**
Solution
Percent of students selected in more than two companies = 30 + 20 = 50%
Therefore, 50% of 1250 = 625

18. **Answer: B**
Solution
Difference = percent of students from college D – percent of students from college A
= 35% of 2000 - 35% of 1000
= 700 – 350 = 350

19. **Answer: D**
Solution
Total no students selected in more than three companies = 35%of 1000 + 10% of 1500 + 30% of 1250 + 25% of 2000
= 350 + 150 +375 + 500
= 1375

20. **Answer: D**
Solution
We cannot determine unless no of students are given.

21. **Answer: B**
Solution
Total marks = 80+72+56+82 = 290

22. **Answer: B**
Solution
Marks of Harshit in maths – marks of Abhay in English
= 90 – 55 = 35

23. **Answer: D**
Solution
Marks of Abhay in science : marks of Kunal in history
= 50:75 = 2:3

24. **Answer: D**
Solution
Jay got 55+20=75 marks in English
Therefore, total marks of jay = 323
Difference bet total marks of jay and Harshit = 323-252 = 71

25. **Answer: E**
Solution

Name	Science (out of 100)	Maths (out of 100)	English (out of 100)	History (out of 100)	Total
Abhay	50	60	55	75	240
Kartik	80	72	56	82	290
Kunal	68	57	80	75	280
Jay	92	78	75	78	323
Harshit	42	90	58	62	252

26. **Answer: C**
Solution
Kia sold 731 cars which is least among them.

27. **Answer: D**
Solution
25% of 558 is 139

Company	2014	2015	2016	2017	2018	Total
Honda	150	128	170	160	175	783
Maruti	140	145	155	165	172	777
Kia	128	150	158	145	150	731
Hyundai	140	145	158	160	165	768
Total	558	568	641	630	662	

Therefore, for Honda, Maruti and Hyundai have sells greater than 25%.

28. **Answer: B**
Solution
In year 2016 for Honda change in sells is 42/128 = 32.81% which is highest among all.

29. **Answer: E**
Solution

Cars Sold by Honda & Maruti = 160+165 = 325 which is 224.13% of kia sell

It is also in case of Maruti & Hyundai.

30. **Answer: D**

Solution

Ratio = 150:160 = 15:16

31. **Answer: D**

Solution

Average of company ZIR is 646/4 = 161.5

Percent $= \frac{180}{161.5} \times 100 = 111.45\%$

Company	Years				Total
	2001	2002	2003	2004	
ZIR	168	180	148	150	646
VIP	156	168	159	174	657
CTU	128	158	169	180	635
ZEN	155	140	160	185	640
Total	607	484	636	689	

32. **Answer: B**

Solution

Percent increase in 2002 to the previous year is 30/128 X 100 = 23.% which is highest among all.

33. **Answer: C**

Solution

Average of CTU in first two years is

$= \frac{128 + 158}{2} = 143$

Average of last two years

$= \frac{169+180}{2} = 174.5$

Difference = 174.5 – 143 = 31.5

Therefore, the average production of first two years of CTU is least as compared to last two years.

34. **Answer: A**

Solution

Average of first two years

$$= \frac{607 + 484}{2} = 545.5$$

Average of last two years

$$= \frac{636 + 689}{2} = 662.5$$

Percent = $\frac{545.5}{662.5} \times 100 = 82.33\%$

35. **Answer: B**

Solution

If the production of all companies increases by 10% then total production also increases by 10%

Therefore, production of year 2005 = 689+10% of 689 = 758

36. **Answer: A**

Solution

% = $\frac{165}{610} \times 100 = 27.04\%$

Institutes	Faculties				
	Arts	Commerce	Science	Management	Total
A	128	124	175	158	585
B	125	160	160	175	620
C	156	148	165	141	610
D	138	158	163	159	618
E	145	144	174	150	613
Total	692	734	837	783	

37. **Answer: B**

Solution

Percent of students studying in management = $\frac{150}{613} \times 100 = 24.46\%$

38. **Answer: C**

Solution

Percent = $\frac{128+125+156}{160+148+158+144} = \frac{409}{610} \times 100 = 67.04\%$

39. **Answer: A**

Solution

Percentage of students

$= \frac{165}{837} \times 100 = 19.71\%$

40. **Answer: E**

Solution

Since maximum 52% doesn't give the right figure of girls studying in the institute C, Hence the answer cannot be determined.

41. **Answer: B**

Solution

20.5% of 400 = 82

Shop types	Direction			
	East	West	North	South
Grocers	25.5	28.2	20.5	24.5
Chemist	13.2	14.5	23.5	28.6
General Store	20.5	18.2	25.8	17.6
Cosmetics	18.8	16.3	23.6	14.6
Food	22	22.8	6.6	14.7
Total	100	100	100	100

42. **Answer: E**

Solution

Both quantities are in percentage form therefore it cannot be compared.

43. **Answer: D**

Solution

Total No. of shops is in ratio 3:2 so we can assume 300 and 200 then general stores in east region is 61 and in west region is 36.

So, $\frac{61}{36} \times 100 = 169.44\%$

44. **Answer: C**

Solution

If both regions have same no of shops,
then we can directly put percentage value
Therefore, 18.2 : 28.6 = 182 : 286 = 91 : 143

45. **Answer: A**

Solution

Grocer shops have highest percentage including all regions therefore grocer shops present in greater numbers

46. **Answer: D**

Solution

Total students enrolled in year 2008 in collage A is 540

Therefore 80% of 540 = 432

Students passed = 60% of 432 = 259

Years	College				
	A	B	C	D	Total
2007	520	460	480	570	2030
2008	540	680	490	520	2230
2009	553	623	510	460	2146
2010	560	620	520	490	2190
2011	540	540	558	450	2088
Total	2713	2923	2558	2490	

47. **Answer: E**

Solution

Students enrolled for computer course = 70% of 2190 = 1533

48. **Answer: C**

Solution

Difference between the average of the year 2007 and 2009 = $\frac{Total\ of\ 2009 - Total\ of\ 2007}{4} = \frac{2146 - 2030}{4}$

$= \frac{116}{4} = 29$

49. **Answer: D**

Solution

Students enrolled in college A in years 2007 and 2008 = 1060

Students enrolled in college D in years 2008 and 2009 = 980

Therefore ratio = 1060:980 = 53:49

50. **Answer: D**

Solution

80% of total students enrolled = 80% of 2190 = 1752

25% were girls therefore 75% were males

Therefore 75% of 1752 = 1314.

51. **Answer: C**

Solution

Required difference = (72+76+62+30+54) – (6+16+36+13) = 294 – 71 = 223

School	Questions Attempted	Correct	Incorrect	Marks Obtained
Animesh	78	72	6	282
Aniket	92	76	16	288
Apurv	98	62	36	212
Atharv	41	30	11	109
Ankit	56	54	2	214

52. **Answer: A**

Solution

Required percentage = $\frac{282+288}{212+109+214} \times 100 =$ 106.54%

53. **Answer: C**

Solution

Required marks
= 4 × (72+76+62) – 1.33 × (6+16+36)
= 763.44

54. **Answer: C**

Solution

By options,
Let the correct answer be 59
∴ Marks = 59 × 4 – 33 = 203

55. **Answer: E**

Solution

Required percentage
$= \frac{282+288+212+109+214}{2000} \times 100 = 55.25\%$

56. **Answer: D**

Solution

Q + 2400 + 1600 = 7200
Q = 3200
R = $\frac{75}{100} \times 3200 = 2400$
Required percentage
$= \frac{2400+2000+3600}{3200+2400+4000} \times 100 = 83\frac{1}{3}\%$

57. **Answer: C**

Solution

P/B = 7/3

Let P & B be 7x & 3x respectively.

ATQ,

B = A = 3x

A + 2800 + 3600 = 8800

A = 2400 = B

Now,

$3x$ = 2400

So, x = 800

And P = 5600

Required answer = (5600 – 4800) + (4000 – 3600) + (3600 –3200) = 1600

58. **Answer: E**

Solution

4000 + 4800 + P = 16000

P = 7200

Now, $\frac{4800}{7200} \times 100 = \frac{2000}{R} \times 100$

R = 3000

Percentage of applicants who attempted CMAT

In 2021 $= \frac{2400}{3200} \times 100 = 75\%$

In 2022 $= \frac{2000}{3000} \times 100 = 66\frac{2}{3}\%$

In 2023 $= \frac{3600}{4000} \times 100 = 90\%$

59. **Answer: B**

Solution

800 > R – 2000 > 400

2400 < P < 2800

And, R = B

Required ratio = R : 3200 (ratio should be less than 1)

Or, 0.75 < required ratio < 0.875

Only (b) satisfies

60. **Answer: D**

Solution

to find P = ?

From I, Q = R

From II,

8800 + P – Q – 9200 = 7200 + R – 8000

P = Q + R – 400

From I & II, P = 2Q – 400

Clearly, A can't be determined even using both statements.

(61 – 66). Solution:

For P: let carrom scores obtained by Anil be 'x'

So, $x - \frac{1}{6} \times (1000-x) = 160$

Or, 6x-1000+x = 160×6 = 960

Or, 7x = 1960

x = 280

So, P $= \frac{280}{1000} \times 100 = 28\%$

For Q: $\frac{30}{100} \times Q - \frac{2}{7} \times \frac{70}{100} \times Q = 140$

0.30Q – 0.20Q = 140

Q = 1400

For R: Carrom scores obtained by Chintu

$= 35 \times \frac{1200}{100} = 420$

Tennis scores obtained by Chintu

= 420-60 = 360

Cricket score obtained by Chintu

= 1200-420-360 = 420

So, the ratio of scores between Cricket to Tennis $= \frac{420}{360} = 7:6$

So, R = 7

For S: $\frac{45}{100} \times S - \frac{9}{22}\left(\frac{55}{100}\right) \times S = 180$

90S – 45S = 36000

45S = 36000

S = 800

For T: Carrom scores obtained by Emma

= 40×1600/100 = 640

Tennis scores obtained by Emma

= 640 - 240 = 400

Cricket score obtained by Emma

= 1600 – 640 – 400 = 560

So, the ratio of scores obtained by Emma in Cricket and Tennis = $\frac{560}{400}$ = 7 : 5

So, T = 5

61. **Answer: A**

Solution

Req. Difference = 1400–800 = 600

62. **Answer: E**

Solution

Score obtained by Anil in Gilli Danda = 280×13/28 = 130

63. **Answer: C**

Solution

Required ratio = 420/360 = 7:6

64. **Answer: D**

Solution

Req. difference = 420 – 400 = 20

65. **Answer:** B

Solution

Req. average = $\frac{1000+1400+1200+800+1600}{5}$

= 1200

66. **Answer:** B

Solution Req. percentage = [(1600–1200) × 100]/1600 = 25%

67. **Answer: D**

Solution

Let total current accounts opened in city A = x

Given,

$5x/18 = 20000$

$x = 20000 \times 18/5$

x = 72000

Total number of accounts opened in city A

= 72000/4 × 15

= 270000

Number of total branches in city A = $\frac{[Total\ ac(saving+current)]}{average\ number\ of\ accounts\ opened\ in\ each\ branches}$

= 270000/1800

= 150

Total number if branches in city C

= $\frac{76800}{800}$

= 96

Required% = $\frac{150-96}{96} \times 100 = 56.25\%$

68. **Answer: C**

Solution

Let total number current accounts opened in city

F = y

Given

$13y/25 – (y – 13y/25) = 640$

y = 25 × 640

y = 16000

Total accounts opened in city F = 16000/2 × 7

= 56000

Average number of accounts opened in each branch in city F = 56000/224 = 250

Number of branches in city C

= $\frac{76800}{800}$ = 96

Required ratio = $\frac{250}{96} = 125:48$

69. **Answer: B**

Solution

Let total current accounts is X and total saving account (47600 – X) in city E

ATQ—

(47600 – X) 25 + 15X = 1120000

1190000 – 25X + 15X = 1120000

X = 70000/10 = 7000

70. **Answer: A**

Solution

Total saving accounts in city B

= $89600 \times \frac{5}{7}$ = 64000

Total saving accounts in city D

= 144 × 550 × 7/11

= 50400

Required average = $\frac{64000+50400}{2} = 57200$

71. **Answer: B**

Solution

Total revenue generated by clothing & Cosmetic section together of Ajio

= $\frac{16}{20} \times [100 - (15 + 20 + 12.5)]$

= $\frac{16}{20} \times 52.5$

= 42 million

Revenue generated by Home and living section of Jabong = $90 \times \frac{[100-(10+25+5+15)]}{100}$

= $90 \times \frac{45}{100} = \frac{81}{2}$

Required percentage = $\frac{\frac{42}{81}}{\frac{2}{}} \times 100$

= $103\frac{19}{27}\% = 104\%$

72. **Answer: C**

Solution

Percentage of Footwear section of Myntra = [100 – (30 + 17.5 + 5)] × $\frac{10}{19}$

= 47.5 × $\frac{10}{19}$ = 25 %

revenue generated by the footwear section of Myntra = 130 × 25/100 = 65/2

revenue generated by the home & living section of Flipkart = $150 \times \frac{100-(40+5+7.5+35)}{100}$

= $150 \times \frac{12.5}{100} = \frac{75}{4}$

Required ratio = $\frac{65\times4}{75\times2} = 26:25$

73. **Answer: A**

Solution

Total revenue generated by cosmetic and

clothing

section together by Ajio.

$= \frac{10}{12.5} \times [100 - (15 + 20 + 12.5)]$

$= 10/12.5 \times 52.5$

$= 42$ million

Total revenue generated by cosmetic and Home & living section together by Flipkart

$= 150 \times \frac{[100-(40+5+35)]}{100}$

$= 3/2 \times 20$

$= 30$ million

Required difference $= 42 - 30 = 12$ million

74. **Answer: E**

Solution

Total revenue generated by all sections of Snapdeal

$= \frac{25}{25} \times 100 = 100\ million$

Total revenue generated by all sections of Ajio

$= \frac{12}{15} \times 100 = 80\ million$

Required percentage $= (100-80)/80 \times 100 = 25\ \%$

75. **Answer: C**

Solution

let Suresh earn Rs S as interest.

So, $S = (23400 - S) \times 20 \times \frac{4}{100}$

$\frac{5S}{4} = 23400 - S$

$\frac{9S}{4} = 23400$

$S = 10400$

∴ required difference

$= 10400 - (18000 - 16000) = 10400 - 2000$

$=$ Rs 8400

76. **Answer: B**

Solution

Req. time $= (20625 - 15000) \times \frac{100}{15000} \times 15$

$= \frac{5625}{150} \times 15$

$= 2.5$ years

77. **Answer: A**

Solution

let Suresh earn Rs S as interest.

So, $S = (23400 - S) \times 20 \times \frac{4}{100}$

$5S/4 = 11700 - S$

$9S/4 = 23400$

$S = 10400$

∴ required percentage $= \frac{13000-10000}{10000} \times 100$

$= 30\%$

78. **Answer: D**

Solution

Interest earned by Pratik

$$\frac{PNR}{100} = \frac{10000 \times 25 \times 3}{100} = 7500$$

∴ Total Amount = 10000 + 7500 = 17500

So, Required ratio $= \frac{17500}{20625} = \frac{28}{33}$

79. **Answer: A**

Solution

$$SI = \frac{PNR}{100}$$

$$2000 = \frac{16000 \times R \times 2}{100} = 6.25\%$$

So, required interest

$= 10000 \times 6.25 \times \frac{3}{100} = Rs\ 1875$

80. **Answer: B**

Solution

Cost price of item S $= 1000 \times \frac{110}{100}$

$=$ Rs. 1100

Market price of item S

$= 1100 \times \frac{110}{100} \times \frac{100}{55} = Rs.2200$

81. **Answer: A**

Solution

Market price of item A

$= 1000 \times \frac{120}{100} \left(\frac{100}{75}\right)$

$=$ Rs. 1600

Cost price of item Q $= \frac{1500}{125} \times 100 = Rs.1200$

Average price $= \frac{1600+1200}{2} = Rs.1400$

Required % $= \frac{1400-800}{800} \times 100 = 75\%$

82. **Answer: D**

Solution

Discount% for item R

$= 2 \times \frac{900-800}{800} \times 100 = 25\%$

Market price of item R

$= \frac{900}{75} \times 100 = Rs.1200$

Required ratio = 1000: 1200 = 5:6

83. **Answer: C**

Solution

Market price of item Q

$= \frac{1500}{250} \times 300 = Rs.1800$

Required percentage $= \frac{900}{1800} \times 100 = 50\%$

84. **Answer: E**

Solution

let cost price of item S = Rs.100x

Selling price of item S

$= 100x \times \frac{110}{100}$ = Rs. 110x

Market price of item S

$= \frac{110x}{55} \times 100 = Rs.200x$

ATQ

(200x – 110x) – (110x – 100x) = 880

300x – 220x = 880

80x = 880

x = 880/80

x = 11

So, 110x = 110 × 11

110x = Rs. 1210

85. **Answer: B**

Solution

Total vacant seats in bus E

$= 30 \times \frac{40}{100}\left(\frac{100}{40}\right)$ = 30

So, total vacant seats in bus A, B, C & D

=80 – 30 = 50

Total number of vacant seats in D

$= 80 - \left(30 + 40 \times \frac{40}{100} + 48 \times \frac{25}{100} + 30 \times \frac{40}{100}\right)$

$= 10$

86. **Answer: B**

Solution

Total vacant seats in bus B = $48 \times \frac{25}{100}$ = 12

Total booked seats in bus A = $20 \times \frac{60}{100}$ = 24

Required ratio = 12 : 24 = 1 : 2

87. **Answer: D**

Solution

Vacant seats in bus A = $40 \times \frac{40}{100} = 16$

Vacant seats in bus C = $30 \times \frac{40}{100} = 12$

Required percentage = $\left[\frac{16-12}{16}\right] \times 100 = 25\%$

88. **Answer: C**

Solution

Total seats available in bus E

= 48 × 75/100 × 50/36 × 16/10 = 40

So, total seats available in bus D

= 130 – 80 = 50

Required percentage =

$\frac{40 \times \frac{40}{100} + 30 \times \frac{40}{100} + 50 \times \frac{20}{100}}{3} \times 100$

$= \frac{16+12+10}{3} \times 100 = 31.66\%$

89. **Answer: B**

Solution

Let total seats in bus D = x

So, total seats in bus E = (130 – x)

ATQ –

$(130 - x) \times \frac{3}{8} - x \times \frac{20}{100}$

= 20

1950 – 15x – 8x = 800

23x = 1150

x = 50

So, required ratio $= 50 \times \frac{80}{100} : (130 - 50) \times \frac{5}{8}$

= 40 : 50 = 4 : 5

90. **Answer: A**

Solution

Required average = $\frac{40 \times \frac{60}{100} + 48 \times \frac{75}{100} + 30 \times \frac{60}{100}}{3}$

$= \frac{24+36+18}{3}$ = 26

91. **Answer: C**

Solution

Let the number of leaders in the company P = 2x

Then, the number of other employees in company

P = 150/100 × 2x = 3x

ATQ, 160 + 2x + 3x = 660

x = 100

Required result = $\frac{2 \times 100}{800} \times 100 = 25\%$

92. **Answer: B**

Solution

Required average

$= \frac{660 + 950 + 1220 + 770 + 800}{5} = 880$

93. **Answer:** E

Solution

Total number of leaders in company C =

1220 – 150– 670 =400

Total number of employees in company D =

770

Required ratio = 400 : 770 = 40 : 77

94. **Answer: B**

Solution

Let number of managers in company S be x.

Then, number of other employees in company

D = 4x

ATQ,

x + 270 + 4x = 770

x = 100

Required percentage = $\frac{160-100}{100}$ × 100 = 60%

95. **Answer: E**

Solution

Number of managers in company Q

= $\frac{125}{100}$ × 160 = 200

So, number of other employees in company Q = 950 – 200 – 250 = 500

Required difference = 500 – 270 = 230

96. **Answer: A**

Solution

Total number of employees in company F

= 1/2 × (950+770) = 860

Total number of leaders in company F

= $\frac{3}{2+3+5}$ × 860 = 258

97. **Answer: C**

Solution

Let expenditure of company in the year 2011 be 'e'

So, e = 1440 × 8/9 = 1280 cr.

And let Revenue of company in the year 2012 be 'a'

∴ 1750 × $\frac{96}{100}$ = 1680 cr.

Required difference = 1680 –1280 = 400 cr.

98. **Answer: D**

Solution

Let expenditure of company in the year 2011 be 'x'

So, x = 1440 × 8/9 = 1280 cr.

So, profit of company in the year 2013 = (1440– 1280) × 2 = 320 cr.

Let expenditure in the year 2013 be '5x'

So, revenue of company will be '6x'

ATQ –

6x – 5x = 320

x = 160 cr.

Expenditure of company in the year 2013 = 1600cr.

Required ratio = 1280 : 1600 = 4 : 5

99. **Answer: A**

Solution

Loss of company in the year 2012 =

1750 × 4/100 = 70 cr

Let total expenditure of company in the year 2014 = 100x

So, total revenue of company in the year 2014 =105x

ATQ

2268 × $\frac{100x}{105x}$ = 2160 cr

Profit of company in the year 2014

= 2268 – 2160 = 108 cr.

Required percentage = $\frac{108-70}{108}$ × 100

= 35.15% ~.35%

100. **Answer: B**

Solution

Loss of company in the year 2012

= 1750 × 4/100 = 70 cr

Total loss of company in the year 2015

= 70 × $\frac{900}{175}$ = 360

Total expenditure of company in the year 2015

= $\frac{100 \times 360}{30}$ = 1200 cr.

∴ Required percentage = $\frac{1440-1200}{1200}$ × 100 = 20%

DI: VISUAL SOLUTIONS

1. **Answer: C**

Solution

We can use the given information that 33.33% of Class E students got a distinction.

Let's denote the total number of students in Class E as 'x'. We know that 33.33% of these students got a distinction, which is equivalent to 32 students. We can set up the following equation:

$\left(\frac{33.33}{100}\right) x = 32$

To solve for 'x', we can rearrange the equation:

$x = \frac{32 \times 100}{33.33}$

$x \approx 96$

Therefore, the total number of students in Class E is approximately 96.

Number of students who did not score a distinction = Total number of students in Class E – Number of students who got a distinction

= 96 – 32 = 64

Hence, there are 64 students in Class E who did not score a distinction.

2. **Answer: D**

Solution

Class A: 30 students with distinction

Class B: 48 students with distinction

Class C: 36 students with distinction

Class D: 44 students with distinction

Class E: 32 students with distinction

To calculate the total number of students with distinction, we sum up the number of students with distinction in each class:

Total students with distinction = 30 + 48 + 36 + 44 + 32 = 190

We know that 38% of the students in Class 10^{th} got a distinction. Let's assume the total number of students in Class 10^{th} is "x". We can set up the following equation:

$\frac{38}{100} \times x = 190$

$x = \frac{190 \times 100}{38} \rightarrow \therefore x = 500$

Therefore, the number of students in Class 10^{th} is 500.

3. **Answer: A**

Solution

Number of girls who got distinction = 45% of 200 = 90

So, 90 girls got distinction in class 10th.

The second part of the question asks us to find the number of boys who got distinction in class 10th. We are given the number of students who got distinction in each of the five classes (A, B, C, D, and E). We can find the total number of students who got distinction as follows:

Total number of students with distinction = 30 + 48 + 36 + 44 + 32 = 190

Hence, the number of boys who got distinction= total number of students with distinction–number of girls with distinction

= 190 – 90 = 100

4. **Answer: B**

Solution

The total number of students with distinction in class 10th is the sum of the students with distinction in each class:

Total students with distinction = 30 + 48 + 36 + 44 + 32 = 190

Number of girls with distinction = 0.5 × Total students with distinction $= 0.5 \times 190 = 95$

Now, we can determine the number of girls who did not get distinction:

Number of girls without distinction = Total number of girls – Number of girls with distinction = 225 – 95 = 130

Therefore, there are 130 girls who did not get distinction in class 10^{th}

5. **Answer: E**

Solution

First, let's calculate the total number of students who passed the class 10th exam:

Total students = 750

Failed students = 28% of 750 = 0.28 × 750 = 210

Students who passed = Total students – Failed students = 750 – 210 = 540

Now,

let's calculate the number of students who passed but did not get distinction:

Number of students with distinction = Sum of students in each class = 30 + 48 + 36 + 44 + 32 = 190

Number of students who passed but did not get distinction = Students who passed – Number of students with distinction = 540 – 190 = 350

Percentage of students who passed but did not get distinction = (Number of students who passed but did not get distinction / Total students) × 100

=>Percentage of students who passed but did not get distinction

$= \left(\frac{350}{750}\right) \times 100 = 46.67\%$

Therefore, approximately 46.67% of the students passed class 10th but did not get distinction

6. **Answer: E**

Solution

Required % $= \frac{10}{30} \times 100 = 33.3\%$ of electrification of villages in Tripura in the year 2004

7. **Answer: D**

Solution

Number of villages in Assam where electrification was done in 2003 = 20

Number of villages in Manipur where electrification was done in 2003 = 25

So, required ratio = 4: 5

8. **Answer: C**

Solution

In Assam, the number of villages where electrification was done = 15 + 20 + 15 = 50

In Manipur = 20 + 25 + 30 = 75

In Tripura = 20 + 25 + 30 = 75

In Nagaland = 20 + 10 + 25 = 55

So, maximum electrification in both Tripura and Manipur.

9. **Answer: B**

Solution

Total number of villages in four states where electrification was done

=50+75+75+55 = 255

So, cost of electrification = 75,00,000 × 255 = Rs.1,91,25,00,000

10. **Answer: A**

Solution

Number of villages where electrification was done in 2002 = 20 + 30 + 15 + 25 = 90

Number of villages where electrification was done in 2003 = 25 + 25 + 20 + 10 = 80

Number of villages where electrification was done in 2004 = 30 + 20 + 15 + 20 = 85

In 2002 maximum electrification work was done.

11. **Answer: C**

Solution

Number of employees working in company R in the year 2008 = 1200

Number of employees working in company P in the same year = 1600

Required % $= \frac{1200}{1600} \times 100 = 75\%$

12. **Answer: C**

Solution

Number of employees working in Q and S together in 2008

= 2000 + 1200 = 3200

Number of employees working in R and T together in the year 2009

= 2400 + 1600 = 4000

Required ratio = 3200: 4000

= 4 : 5

13. **Answer: B**

Solution

Number of employees working in the company R in the year 2019 = 2400

Number of employees working in company S in 2019 = 800

Required % $= \frac{2400}{800} \times 100 = 300\%$

14. **Answer: A**

Solution

Required average = $\frac{1600+2000+1200+1200+2400}{5}$

$= \frac{8400}{5} = 1680$

15. **Answer: D**

Solution

Number of employees working in T in the year 2008 = 2400

Number of employees working in Q in 2009 = 400

Required Ratio =2400:400=6:1

16. **Answer: C**

Solution

Let's calculate the percentage change for each year for company B:

2008 to 2009:

$\left(\frac{12.0-10.0}{10.0}\right) \times 100 = 20.0\%$ increase

2009 to 2010:

$\left(\frac{11.0-12.0}{12.0}\right) \times 100 = -8.33\%$ decrease

2010 to 2011:

$\left(\frac{14.0-11.0}{11.0}\right) \times 100 = 27.27\%$ increase

2011 to 2012:

$\left(\frac{13.0-14.0}{14.0}\right) \times 100 = -7.14\%$ decrease

2012 to 2013:

$\left(\frac{11.0-13.0}{13.0}\right) \times 100 = -15.38\%$ decrease

Based on these calculations, we can see that the highest percentage increase in the income of company B occurs in 2010 to 2011 with a 27.27% increase.

17. Answer: B

Solution

To calculate the profit percentage of Company A in 2009, we need to determine the profit first. Profit is calculated by subtracting the expenditure from the income.

Income in 2009 = Rs. 10.0 lakh

Expenditure in 2009 = Rs. 2.25 lakh

Profit in 2009 = Income – Expenditure

= Rs. 10.0 lakh – Rs. 2.25 lakh = Rs. 7.75 lakh

Now, to calculate the profit percentage, we divide the profit by the expenditure and multiply by 100.

Profit percentage in 2009 = $\frac{\text{Profit}}{\text{expenditure}} \times 100$

$= \frac{7.75\text{lakh}}{2.25\text{lakh}} \times 100 = 344.44\%$

Therefore, the profit percentage of Company A in 2009 was 344.44%.

18. Answer: A

Solution

To find the expenditure of company B in the year 2011, we can use the formula for profit percentage:

Profit% = $\left[\frac{\text{Income}-\text{Expenditure}}{\text{Expenditure}}\right] \times 100$

Given that the profit percentage of company B in 2011 is 20% and the income for that year is 14.0 Rs. lakh, we can set up the equation:

$20\% = \left[\frac{14.0-\text{Expenditure}}{\text{Expenditure}}\right] \times 100$

$0.20 = \frac{14.0-\text{Expenditure}}{\text{Expenditure}}$

$0.20 \times \text{Expenditure} = 14.0 - \text{Expenditure}$

$1.20 \times \text{Expenditure} = 14.0$

$\text{Expenditure} = \frac{14.0}{1.20} \approx 11.67$

Therefore, the expenditure of company B in the year 2011 was approximately 11.67 Rs. lakh.

19. Answer: B

Solution

To find the average income of company C over all the years, we need to calculate the sum of the incomes for each year and then divide it by the number of years.

The average income of company C can be calculated as follows:

Average income = (Income in 2008 + Income in 2009 + Income in 2010 + Income in 2011 + Income in 2012 + Income in 2013) / Number of years

Average income

= (12.0 + 9.0 + 10.0 + 8.0 + 10.0 + 9.0)/6

Average income = 58/6

Average income ≈ 9.67 Rs. lakh

Therefore, the average income of company C over all the years is approximately 9.67 Rs. lakh.

20. Answer: A

Solution

The income of company A in 2008 was 8.0 lakh rupees, and in 2010 it was 11.2 lakh rupees.

The difference in income between 2010 and 2008 is 11.2 – 8.0 = 3.2 lakh rupees.

Percentage increase = (3.2/8.0) × 100=40

Therefore, the approximate percentage increase in the income of company A in the year 2010 compared to 2008 is approximately 40%.

21. Answer: D

Solution

Number of men that work in the Marketing department

= 7200 × (23/100) × (7/12) = 966

22. Answer: B

Solution

The number of men working in the production department

$= 7200 \times \frac{17}{100} \times \frac{11}{12} = 1122$

The total number of employees working in production department = $7200 \times \frac{17}{100} = 1224$

∴ required percentage $= \frac{1122}{1224} \times 100$ = 91.67%

23. Answer: C

Solution

The number of men working in the Accounts department

$= 7200 \times \frac{18}{100} \times \frac{2}{9} = 288$

The total number of employees working in that department $= 7200 \times \frac{18}{100} = 1296$

∴ Required ratio = 288/1296 = 2:9

24. Answer: A

Solution

the number of women working in the HR department

=7200 × (28/100) × (3/4) = 1512

the total number of employees in the HR department = (7200 × 28) / 100 = 2016

Required ratio $= \frac{1512}{2016} = \frac{3}{4} = 3:4$

25. Answer: E

Solution

$\frac{7200 \times \frac{14}{100} \times \frac{4}{9}}{7200} \times 100 = 6.2\%$ approx.

26. Answer: E

Solution

Since we do not know the number of times Mahi got to bat, we cannot determine the average runs scored by him whenever he comes out to pitch.

27. Answer: B

Solution

To calculate the ratio of runs scored by Mahi against LSG to the runs scored by him against all the other teams, we need to sum up the runs scored against all other teams first.

Total runs scored against all other teams:

68 + 76 + 28 + 24 + 72 = 268

Now, we can calculate the ratio:

Ratio = Runs scored against LSG / Runs scored against all other teams

Ratio = $\frac{132}{268} = 33:67$

Therefore, the ratio of the runs scored by Mahi against LSG to the number of runs scored by him against all the other teams is 33:67.

28. Answer: C

Solution

To find the number of dot balls faced by Mahi, we need to subtract the number of balls scored through boundaries (sixes, fours) and the number of balls scored through doubles and singles from the total number of balls faced.

Number of balls scored through sixes:

$$\frac{72 \text{ runs}}{6 \text{ runs per ball}} = 12 \text{ balls}$$

Number of balls scored through fours:

$$\frac{136 \text{runs}}{4 \text{ runs per ball}} = 34 \text{ balls}$$

Number of balls scored through doubles:

$$\frac{102 \text{runs}}{2 \text{runs per ball}} = 51 \text{ balls}$$

Number of balls scored through singles: (Total runs – runs scored through sixes – runs scored through four – runs scored through doubles) / 1 run per ball

$$= \frac{400 - 72 - 136 - 102}{1} = 90 \text{ balls}$$

Total balls faced – (balls scored through sixes + balls scored through fours + balls scored through doubles + balls scored through singles)

= 374 – (12 + 34 + 51 + 90)

= 374 – 187

= 187 dot balls

Therefore, Mahi faced 187 dot balls in the given matches.

29. Answer: D

Solution

To calculate the strike rate of a batsman, you need to divide the total number of runs scored by the total number of balls faced and then multiply the result by 100. In this case, Mahi has played a total of 374 balls and has scored a total of 68 + 132 + 76 + 28 + 24 + 72 = 400 runs.

The formula to calculate the strike rate is:

Strike Rate

$= \frac{Total\ runs\ scored}{Total\ balls\ faced} \times 100$

So, for Mahi:

Strike Rate = $\left(\frac{400}{374}\right) \times 100$

Strike Rate = $(1.07) \times 100 = 107$

Therefore, the strike rate of Mahi is 107.

30. Answer: E

Solution

To calculate the batting average of Mahi, we need to divide the total runs scored by the number of times he got out. In this case, Mahi got out 11 times during the tournament.

Total runs scored by Mahi

= 68 + 132 + 76 + 28 + 24 + 72 = 400

Batting Average

$= \frac{Total\ runs\ scored}{Number\ of\ times\ out} = \frac{400}{11} \approx 36.36$

Therefore, the batting average of Mahi is approximately 36.36.

31. Answer: C

Solution

Required answer

$= \left(\frac{24}{100} \times 5800 - \frac{28}{100} \times 3600\right)$

$+ \left(\frac{11}{100} \times 5800 - \frac{14}{100} \times 3600\right.$

$= 1392 - 1008 + 638 - 504$

$= 384 + 134 = 518$

32. Answer: E

Solution

Required percentage$= \frac{15 \times 3600}{16 \times 5800} \times 100 = 58\%$

33. Answer: A

Solution

$$= \frac{[(24 \times 58 - 28 \times 36) + (11 \times 58 - 14 \times 36) + (18 \times 58 - 21 \times 36)]}{3}$$

$$= \frac{1392 - 1008 + 638 - 504 + 1044 - 756}{3}$$

$= 268.67 = 269$

34. Answer: D

Solution

Required percentage

$= \frac{\frac{18}{100}\times5800-\frac{21}{100}\times3600+\frac{31}{100}\times5800-\frac{22}{100}\times3600}{\frac{(31+18)}{100}}\times100$

$=\frac{1044-756+1798-792}{1798+1044}\times100$

=45.5%

35. Answer: C

Solution

Required ratio = 18 x 58: 21 x 36

= 58: 42 = 29: 21

36. Answer: B

Solution

Required average

$= \frac{(190+172)+(162+166)}{2}$

= 345

37. Answer: A

Solution

Required ratio = 160+190:178+172

= 350:350 = 1: 1

38. Answer: D

Solution

Required % = $\frac{\{(168+172)-160\}}{160}\times$ 100 = 112.5 %

39. Answer: A

Solution

Required difference

= (158 + 190 + 162) – (168 + 172+166) = 510 – 506 = 4

40. Answer: C

Solution

Required total number of pens

$= \frac{168+178+172+166}{4} = \frac{684}{4} =$ 171

41. Answer: B

Solution

Boys playing Chess

$= 4000 \times \frac{100-45}{100}$

= 2200

Girls playing Soccer & Cricket together

$= 2500 \times \frac{60}{100} + 3000 \times \frac{50}{100}$

= 1500 + 1500 = 3000

Required % $= \frac{2200}{3000}\times 100 =$ 73 ⅓ %

42. Answer: A

Solution

Boys playing Cricket and Kabaddi together

$= 3000 \times \frac{100-50}{100} + 3500 \times \frac{100-40}{100}$

$= 1500 + 2100 = 3600$

Girls playing Table tennis

$= 1500 \times \frac{30}{100}$

= 450

Required ratio = 3600:450

= 8 : 1

43. Answer: D

Solution

Average number of girls playing Chess, Soccer & Table tennis

$= ⅓ \times (4000 \times \frac{45}{100} + 2500 \times \frac{60}{100} + 1500 \times \frac{30}{100})$

= ⅓ × (1800 + 1500 + 450) = 1250

Boys playing Soccer & Cricket together = $2500 \times \frac{100-60}{100} + 3000 \times \frac{100-50}{100}$

= 1000 + 1500 = 2500

Required % $= \frac{2500-1250}{2500}\times 100 = 50\%$

44. Answer: E

Solution

Total students playing Basketball

$= \frac{160}{100}\times 2500 = 4000$

Boys playing Basketball and Soccer together

$= 4000 \times \frac{7}{10} + 2500 \times \frac{100-60}{100}$

= 2800 + 1000 = 3800

Girls playing Cards and Chess together

$= 4000 \times \frac{3}{10} + 4000 \times \frac{45}{100}$

= 1200 + 1800 = 3000

Required difference = 3800 − 3000 = 800.

45. Answer: C

Solution

Boys playing Chess, Soccer and Table tennis together

$= \left(4000 \times \frac{100-45}{100}\right) + \left(2500 \times \frac{100-60}{100}\right) + \left(1500 \times \frac{100-30}{100}\right)$

= 2200 + 1000 + 1050 = 4250

Girls playing Cricket and Kabaddi together

$= \left(3000 \times \frac{50}{100}\right) + \left(3500 \times \frac{40}{100}\right)$

= 1500 + 1400 = 2900

Required difference = 4250 − 2900 = 1350

46. Answer: C

Solution

Number of runs scored by Kohli against Pakistan and Bangladesh

= 144+107+251

Total number of runs scored by Kohli Throughout the tournament

= 76+83+69+144+107+120+95=694

Therefore, the percentage of runs scored by Kohli against Pakistan and Bangladesh can be determined by,
Percentage of runs=number of runs scored against Pakistan and Bangladesh Total number of runs scored
$= \frac{251}{694} = 36.167\%$
Hence the answer is 36%

47. Answer: A

Solution

To calculate Virat's average, you need to divide the total runs he scored by the number of times he got out. In this case, Virat lost his wicket 5 times and scored a total of 694 runs.
Average = Total runs / Number of times out
Therefore, Virat's average would be:
$\text{Average} = \frac{694 \text{ runs}}{5 \text{ times out}}$
$\text{Average} = 138.8 \text{ runs}$
So, Virat's average during the tournament would be 138.8 runs

48. Answer: C

Solution

Virat's strike rate can be calculated using the following formula:
Strike Rate $= \left(\frac{\text{Total Runs Scored}}{\text{Total Balls Faced}}\right) \times 100$
In this case, Virat scored a total of 694 runs and faced 500 balls. Let's plug these values into the formula:
Strike Rate $= \left(\frac{694}{500}\right) \times 100$
Calculating the strike rate:
Strike Rate = 1.388 × 100
Strike Rate ≈ 138.8
Therefore, Virat's strike rate in the tournament is approximately 138.8

49. Answer: E

Solution

Total runs scored by Virat Kohli = 694
Percentage of runs scored against England
$= \frac{\text{Runs scored against England}}{\text{Total runs scored}} \times 100 = \frac{76}{694} \times 100$
=10.95%
Therefore, Virat Kohli has scored approximately 10.95% of his total runs against England

50. Answer: B

Solution

To calculate the number of dot balls faced by Virat Kohli, we need to subtract the runs scored through boundaries (fours and sixes) and the runs scored through twos and singles from the total number of balls faced.
Given:
Number of sixes hit by Kohli = 25
Number of fours hit by Kohli = 60
Number of twos taken by Kohli = 70
Total number of balls faced by Kohli = 500
First, let's calculate the total runs scored through boundaries: Total runs scored through boundaries = (6 runs per six × number of sixes) + (4 runs per four × number of fours)
Total runs scored through boundaries
= (6 × 25) + (4 × 60) = 150 + 240
Total runs scored through boundaries = 390
Next, let's calculate the total runs scored through twos and singles:
Total runs scored through twos and singles = Total runs scored – Total runs scored through boundaries
Total runs scored = 76 + 83 + 69 + 144 + 107 + 120 + 95
Total runs scored = 694
Total runs scored through twos and singles = 694 – 390
Total runs scored through twos and singles = 304
Number of dot balls faced = 500 – (25 + 60 + 70 + 304)
Number of dot balls faced = 500 – 459
Number of dot balls faced = 41
Therefore, Virat Kohli faced 41 dot balls out of the 500 balls he played

51. Answer: C

Solution

To find the number of trucks parked at the bay next week after a 24% increase, we need to calculate the increase in the number of trucks and add it to the current number of trucks.
Let's calculate the increase in the number of trucks:
Increase = 24% of the current number of trucks on Monday = $\frac{24}{100} \times 125 = 0.24 \times 125 = 30$
Next, we add this increase to the current number of trucks on Monday:
Number of trucks next week = Current number of trucks + Increase = 125 + 30 = 155
Therefore, the number of trucks parked at the bay next week would be 155

52. Answer: D

Solution

To find the number of trucks parked at the bay on Sunday, we need to calculate 40% of the total number of trucks parked throughout the rest of the week.

First, let's calculate the total number of trucks parked throughout the rest of the week:
Total
= Monday + Tuesday + Wednesday + Thursday + Friday + Saturday
= 125 + 122 + 175 + 150 + 133 + 210 = 915
Now, we can find the number of trucks parked at the bay on Sunday:
Sunday
$= 40\% \text{ of Total} = 0.4 \times \text{Total} = 0.4 \times 915 = 366$
Therefore, the number of trucks parked at the bay on Sunday is 366

53. Answer: E

Solution

Let's calculate the number of trucks parked on Sunday of this week:
Number of trucks parked on Sunday = 60% of the number of trucks parked throughout the rest of the week
Total number of trucks parked throughout the rest of the week = 915
Number of trucks parked on Sunday
$= 60\% \text{ of } 915 = 0.6 \times 915 = 549$
Now, let's calculate the number of trucks parked throughout the next week:
Number of trucks parked this week+ number of trucks parked on Sunday-200
= 915 + 549 - 200 = 1264
Hence total number of trucks parked for the two weeks= number of trucks parked this week+ number of trucks parked this Sunday+ number of trucks parked next week
= 915 + 549 + 1264 = 2728

54. Answer: A

Solution

Let's calculate it step by step:
Total number of trucks parked throughout the week: Total = 915
Calculate the percentage of trucks parked on Saturday:
Percentage =
$\frac{\text{Number of trucks parked on Saturday}}{\text{Total}} \times 100$
$= \left(\frac{210}{915}\right) \times 100 = 22.95\%$
Therefore, approximately 22.95% of the trucks are parked on Saturday

55. Answer: B

Solution

The total number of trucks parked on weekdays (Monday to Friday) is:
125 + 122 + 175 + 150 + 133 = 705
The total number of trucks parked for the entire week is:
705 + 210 (Saturday) = 915
Now, let's calculate the percentage of trucks parked on weekdays:
$\left(\frac{705}{915}\right) \times 100 = 77.04\%$
Therefore, approximately 77.04% of trucks are parked at the bay on weekdays

56. Answer: C

Solution

To find the total number of kilometers travelled throughout the week, you need to add up the distances travelled on each day.
Adding up the distances:
69 + 79 + 62 + 70 + 65 + 75 = 420
Therefore, he travels a total of 420 kilometers throughout the week

57. Answer: A

Solution

Total distance travelled on Tuesday, Thursday, and Saturday = 79 + 70 + 75 = 224 kilometers
Percentage
$$\frac{\text{Total distance travelled on Tuesday, Thursday, and Saturday}}{\text{Total distance travelled in a week}} \times 100$$
Total distance travelled in a week = 69 + 79 + 62 + 70 + 65 + 75 = 420 kilometers
Substituting the values, we get:
Percentage $= \left(\frac{224}{420}\right) \times 100$
Percentage = 53.33%
Therefore, Mr. Taneja travelled 53.33% of the total distance on Tuesday, Thursday, and Saturday

58. Answer: D

Solution

Total distance travelled this week
= 69 + 79 + 62 + 70 + 65 + 75 = 420 km
Increase in distance = 35% of total distance travelled this week = 0.35 x 420 = 147 km
Distance travelled next week = Total distance travelled this week + Increase in distance
= 420 + 147 = 567 km
Therefore, Mr. Taneja will travel 567 km next week if he covers 35% more distance than this week

59. **Answer: B**

Solution

Total distance travelled in the current week

= 69 + 79 + 62 + 70 + 65 + 75 = 420 km

Total distance travelled in the next week

= Distance travelled per day × Number of days

$= 42\frac{\text{km}}{\text{day}} \times 6 \text{ days} = 252 \text{ km}$

Therefore, Gaurav would travel a distance of 252 kilometers in the next week

60. **Answer: E**

Solution

To determine the number of weeks Gaurav needs to cycle to travel a total of 5040 kilometers, we can calculate the total distance he covers in a week and then divide the total distance by the weekly distance to find the number of weeks.

Let's add up the distances covered from Monday to Saturday:

Total distance covered in a week = 420 km

Now, we can calculate the number of weeks Gaurav needs to cycle:

Total distance Gaurav wants to cover = 5040 km

Number of weeks = Total distance / Weekly distance

Number of weeks

$= \frac{5040 \text{ km}}{420 \text{ km}} = 12 \text{ weeks}$

∴ Gaurav needs to cycle for 12 weeks to travel a total of 5040 kilometers, assuming he rests on Sundays

61. **Answer: B**

Solution

To find the percentage of boys in class A, we can subtract the percentage of girls from 100%:

Percentage of boys in class A = 100% – 66.66% = 33.33%

Number of boys in class A

= Percentage of boys in class A × Total number of students in class A

Number of boys in class A $= 33.33\% \times 69$

Number of boys in class A = 23

∴ there are 23 boys in class A

62. **Answer: E**

Solution

For class A: Percentage of boys

= 100% – 66.66% = 33.33%

Number of boys in class A = 33.33% of 69 = 23 boys

For class B: Percentage of boys

= 100% – 71.42% = 28.57%

Number of boys in class B = 28.57% of 77 = 22 boys

For class C: Percentage of boys

= 100% – 50% = 50%

Number of boys in class C = 50% of 54 = 27 boys

For class D: Percentage of boys

= 100% – 56.25% = 43.75%

Number of boys in class D = 43.75% of 96 = 42 boys

For class E: Percentage of boys

= 100% – 80% = 20%

Number of boys in class E = 20% of 85 = 17 boys

Therefore, the number of boys that pass the exam is

$= \frac{1}{2} \times (23 + 22 + 27 + 42 + 17) = 65.5 \text{ boys}$

Which is not possible.

Hence (E) Cannot be determined.

63. **Answer: A**

Solution

Number of girls in Class A

$= 69 \times \left(\frac{66.66}{100}\right) = 46$

Class B:

Number of girls in Class B

$= 77 \times \left(\frac{71.42}{100}\right) = 55$

Class D:

Number of girls in Class D

$= 96 \times \left(\frac{56.25}{100}\right) = 54$

Class E:

Number of girls in Class E

$= 85 \times \left(\frac{80}{100}\right) = 68$

Therefore, the number of girls is = 46 + 55 + 54 + 68 = 223

64. **Answer: A**

Solution

For class A: Percentage of boys

= 100% – 66.66% = 33.33%

Number of boys in class A = 33.33% of 69 = 23 boys

For class B: Percentage of boys

= 100% – 71.42% = 28.57%

Number of boys in class B = 28.57% of 77 = 22 boys

For class C: Percentage of boys

= 100% – 50% = 50%

Number of boys in class C = 50% of 54 = 27 boys

For class D: Percentage of boys

= 100% – 56.25% = 43.75%

Number of boys in class D = 43.75% of 96 = 42 boys

For class E: Percentage of boys

= 100% - 80% = 20%

Number of boys in class E = 20% of 85 = 17 boys

Total number of boys= 23 + 22 + 27 + 42 + 17 = 131 boys

Hence, there are 131 boys.

65. Answer: E

Solution

Number of students in class A = 69

Number of students in class B = 77

Number of students in class C = 54

Number of students in class D = 96

Number of students in class E = 85

Total number of students = 69 + 77 + 54 + 96 + 85

Total number of students = 381

Therefore, the total number of students is 381.

66. Answer: C

Solution

→ No. of illiterate female from village B

= 60 % (7000) = 4200

→ No. of illiterate from village B

$= \left(\frac{9}{20}\right) \times 20000 = 9000$

Therefore,

→ No. of illiterate male from village B

= 9000- 4200 =4800

→ No. of male from village B

= 65 % (20000) = 13000

→ % of male, who is illiterate from village B

$= \left(\frac{4800}{13000}\right) \times 100 = 36.9 \approx 37(\text{ans})$

67. Answer: B

Solution

→ No. of Literate from village A

$= \left(\frac{2}{5}\right) \times 7500 = 3000$

→ No. of Literate from village B

$= \left(\frac{11}{20}\right) \times 20000 = 11000$

→ No. of Literate from village C

$= \left(\frac{13}{15}\right) \times 15000 = 13000$

→ No. of Literate from village D

$= \left(\frac{4}{5}\right) \times 27500 = 22000$

→ No. of Literate from village E

$= \left(\frac{1}{4}\right) \times 25000 = 6250$

→ No. of Literate from village F

$= \left(\frac{11}{30}\right) \times 30000 = 11000$

→ Total no. of literate in all villages=

3000+11000+13000+22000+6250+11000

= 66,250

→ Total no. of people in all villages=

7500+20000+15000+27500+25000+11000

=125000

→ % of literate people in all villages

$= \frac{66250}{125000} \times 100 = 53\ \%\ (\text{ans})$

68. Answer: C

Solution

→ Illiterate from village B= 20000-11000 =9000

→ Illiterate from village C=15000-13000 =2000

→ Illiterate from village D= 27500-22000 =5500

→ Female from village A= 48% (7500) = 3600

→ Female from village E= 61% (25000) = 15250

→ Female from village F= 25% (30000) = 7500

→ Ratio

= (9000+2000+5500): (3600 + 15250+7500)

= 16500: 26350

= 330: 527 (Ans)

69. Answer: D

Solution

Since we don't have enough data for village F

We cannot determine the answer

70. Answer: A

Solution

Female from village A= 3600

Female from village C = 8250

Total = 11850

Female from village D= 8250

Female from village F= 7500

Total= 15750

Less% $= \frac{15750-11850}{15750} \times 100 = 24.76\ \%$

71. Answer: C

Solution

No. of students cleared from Math's department

$= \frac{60}{360} \times 8470 = 1412$

→ No. of students appeared from English department

$= \frac{27}{100} \times 54840 \approx 14807$

→ Difference = 14807 - 1412 = 13395

72. Answer: D

Solution

No. of students cleared from commerce & other dept.

$= \frac{72+67}{360} \times 8470$

$= \frac{139}{360} \times 8470 = 3270$

→ No. of students cleared physics department

$= \frac{42}{360} \times 8470 = 988$

$\rightarrow X = \frac{3270}{988} \times 100$

$\rightarrow X = 331\%$

73. Answer: C

Solution

Ratio = (Math's +Physics): (Chemistry + Commerce)

= (18 + 14) : (11 + 23) = 32:34 = 16:17

74. Answer: A

Solution

English Department:

$\rightarrow$ Appeared = $\frac{27}{100} \times 54840 = 14807$

$\rightarrow$ Cleared = $\frac{88}{360} \times 8470 = 2070$

$\rightarrow$ Difference = (14807 - 2070) = 12737

Physics Department:

$\rightarrow$ Appeared = $\frac{14}{100} \times 54840 = 7677$

$\rightarrow$ Cleared = $\frac{42}{360} \times 8470 = 988$

$\rightarrow$ Difference =7677 – 988 = 6689

Chemistry Department:

$\rightarrow$ Appeared= $\frac{11}{100} \times 54840 = 6032$

$\rightarrow$ Cleared = $\frac{31}{360} \times 8470 = 729$

$\rightarrow$ Difference = (6032 - 729) = 5303

Commerce Department:

$\rightarrow$ Appeared = $\frac{23}{100} \times 54840 = 12613$

$\rightarrow$ Cleared = $\frac{72}{360} \times 8470 = 1576$

$\rightarrow$ Difference =(12613-1694) = 10919

Other Departments:

$\rightarrow$ Appeared = $\frac{7}{100} \times 54840 = 3839$

$\rightarrow$ Cleared = $\frac{67}{360} \times 8470 = 1576$

$\rightarrow$ Difference = 3839 - 1576 = 2263

Maths Department:

$\rightarrow$ Appeared = $\frac{18}{100} \times 5480 = 9871$

$\rightarrow$ Cleared = $\frac{60}{360} \times 8470 = 1412$

$\rightarrow$ Difference = 9871 - 1412 = 8459

75. Answer: B

Solution

$\rightarrow$ No. of students not cleared.

= 54840 – 8470 = 46370

$\rightarrow$ % of students not cleared

$= \frac{46370}{54840} \times 100 = 84.55\ \%$

76. Answer: D

Solution

9,60,000×19% - 5,76,000×15%

1,82,400-86,400

96,000

77. Answer: C

Solution

Income of P and Q: Expenditure of T and U

9,60,000 × (15+20) %:5,76,000 × (20+18) %

(9,60,000 ×35%) : (5,76,000×38%)

(960 × 35) : (576 × 38)

33,600 : 21,888

175 : 114

78. Answer: E

Solution

Saving = Income-Expenditure

= 9,60,000 × (20+18)% - 5,76,000 × (17+17)%

= 9,60,000 × 38% - 5,76,000 × 34%

= 3,64,800 - 1,95,840

= 1,68,960

79. Answer: A

Solution

$$\frac{9{,}60{,}000 \times (15 + 12 + 18)\%}{3}$$

$$\frac{9{,}60{,}000 \times 45\%}{3}$$

= 1,44,000

80. Answer: C

Solution

Now the income of U

$= 9{,}60{,}000 \times 19\% \times \frac{110}{100}$

= 2,00,640

The expenditure of U

= 5,76,000×20%×105%

= 1,20,960

Saving = 2,00,640-1,20,960

=79,680

81. Answer: A

Solution

Population of Town B = 0.25×1259000 = 314750

Population of Town C = 0.1×1259000 = 125900

Population that migrates from Town C to Town B

= 0.6×125900 = 75540

Finally, we can find the new population of Town B by adding the current population of Town B to the population that migrates from Town C to Town B: New population of Town B = 314750 + 75540 = 390290

Therefore, the new population of Town B after 60% of the population of Town C migrates to Town B is 390290

82. Answer: B

Solution

Population of town A
= 12,59,000 × 0.2 = 2,51,800
Population of town B
= 12,59,000 × 0.25 = 3,14,750
Population of town C
= 12,59,000 × 0.1 = 125,900
Total population of town A, B, and C = 251,800 + 3,14,750 + 1,25,900 = 6,92,450
Therefore, the total population of town A, B, and C is 6,92,450

83. Answer: C

Solution

Population of town B
= 25% of 12,59,000 = 0.25×12,59,000
= 3,14,750
Population of town C
= 10% of 12,59,000 = 0.10×12,59,000
= 1,25,900
Total population of town B and C
=3,14,750 + 1,25,900 = 4,40,650
Number of people wiped out = 50% of (Population of town B + Population of town C)
$= 0.50 \times 4{,}40{,}650 = 2{,}20{,}325$
Remaining population = (Population of town B + Population of town C) – Number of people wiped out = 4,40,650 – 2,20,325 = 2,20,325
Number of people fatally injured = 30% of Remaining population = 0.30×220,325 = 66,097.5
Number of people who died = 220,325
Number of people who were fatally injured = 66,098
Therefore, approximately 220,325 people died, and approximately 66,098 people were fatally injured during the war in towns B and C

84. Answer: D

Solution

We know that they had a combined population of 35% of the total population, which is:
0.35×1259000 = 440650 people
Next, we know that 50% of the population in towns B and C were wiped out. This means that the number of people who survived is:
440650×0.5 = 220325 people
Of those who survived, 30% were fatally injured. This means that the number of people who survived and were not fatally injured is:
220325×0.7 = 154227.5 people (rounded to the nearest whole number)
Finally, we know that the remaining population migrated to town A. We need to add this number to the initial population of town A to find the new population:
0.2×1259000 + 154228 = 406028 people
Therefore, the new population of town A is 406028 people, which is:
$\frac{406028}{1259000} \times 100\% = 32.25\%$ of the total population.
So, the new population of A as a percentage of the total population is approximately 32.25%

85. Answer: E

Solution

Let's start by finding the current populations of towns A and B.
If town A has 20% of the total population and town B has 25%, then their current populations are:
Town A: 0.2 x 1259000 = 251800
Town B: 0.25 x 1259000 = 314750
To calculate the population of each town after 2 years, we can use the formula:
Population after 2 years = Population × (1 + Growth rate) ^{2}
For town A:
Population after 2 years $= 251800 \times (1 + 0.15)^2$
Population after 2 years = 333006
For town B:
Population after 2 years $= 314750 \times (1 + 0.1)^2$
Population after 2 years = 380848
Therefore, the population of town A and B after 2 years will be 333006 and 380848, respectively

86. Answer: C

Solution

Monday: 75% of 64 liters = 0.75 × 64 = 48 liters
Tuesday: 80% of 45 liters = 0.80 × 45 = 36 liters
Wednesday: 87.50% of 88 liters = 0.875 × 88 = 77 liters
Thursday: 83.33% of 96 liters = 0.8333 × 96 = 80 liters
Friday: 70% of 50 liters = 0.70 × 50 = 35 liters
Saturday: 91.67% of 120 liters = 0.9167 × 120 = 110 liters
Total liters of milk sold from Monday to Saturday = 48 + 36 + 77 + 80 + 35 + 110 = 386 liters

Therefore, a total of 386 liters of milk was sold from Monday to Saturday

87. Answer: A

Solution

To find the amount of cottage cheese available for sale on Sunday, we need to calculate the amount of milk unsold on each day and then convert it to cottage cheese.

First, let's calculate the unsold milk on each day:

Monday: Milk produced = 64 liters

Percentage

sold = 75%

Unsold milk = 64 liters × (1 – 0.75) = 16 liters

Tuesday: Milk produced = 45 liters

Percentage sold = 80%

Unsold milk = 45 liters × (1 – 0.80) = 9 liters

Wednesday: Milk produced = 88 liters Percentage sold = 87.50% Unsold milk = 88 liters × (1 – 0.875) = 11 liters

Thursday: Milk produced = 96 liters

Percentage sold = 83.33%

Unsold milk = 96 liters × (1 – 0.8333) = 16 liters

Friday: Milk produced = 50 liters

Percentage sold = 70%

Unsold milk = 50 liters × (1 – 0.70) = 15 liters

Saturday: Milk produced = 120 liters

Percentage sold = 91.67%

Unsold milk = 120 liters × (1 – 0.9167) = 10 liters

1.5 liters of milk = 750 grams of cottage cheese Therefore, 1 liter of milk = 750 grams / 1.5 liters = 500 grams of cottage cheese

Cottage cheese available for sale on Sunday: Total unsold milk

= 16 + 9 + 11 + 16 + 15 + 10 liters

= 77 liters Cottage cheese =

77 liters × 500 grams/liter = 38,500 grams

Therefore, the amount of cottage cheese available for sale on Sunday is 38,500 grams

88. Answer: E

Solution

Let's calculate the total milk sold on Sunday: Sale on Sunday = (5/4) × (Sale from Monday through Saturday)

Total milk sold = Milk sold on Sunday + Milk sold on Monday + Milk sold on Tuesday + Milk sold on Wednesday + Milk sold on Thursday + Milk sold on Friday + Milk sold on Saturday

Milk sold on Sunday = (5/4) × (Milk sold from Monday through Saturday)

Milk sold on Sunday = (5/4) × (Milk sold on Monday + Milk sold on Tuesday + Milk sold on Wednesday + Milk sold on Thursday + Milk sold on Friday + Milk sold on Saturday)

Now, let's calculate the values:

Milk sold on Sunday =

$\left(\frac{5}{4}\right) \times [\left(\frac{75}{100}\right) \times 64 + \left(\frac{80}{100}\right) \times 45 + \left(\frac{87.50}{100}\right) \times 88 + \left(\frac{83.33}{100}\right) \times 96 + \left(\frac{70}{100}\right) \times 50 + \left(\frac{91.67}{100}\right) \times 120]$

Calculating the values:

Milk sold on Sunday

$= \left(\frac{5}{4}\right) \times [48 + 36 + 77 + 80 + 35 + 110]$

Milk sold on Sunday = $\left(\frac{5}{4}\right) \times 386$

Milk sold on Sunday = $5 \times \frac{386}{4}$

Milk sold on Sunday = 482.5 liters

Therefore, the sale of milk for the whole week= 386 + 482.5 liters

=868.5 liters

89. Answer: B

Solution

Monday: 16 × 1.25 = 20 liters

Tuesday: 9 × 1.25 = 11.25 liters

Wednesday: 11 × 1.25 = 13.75 liters

Thursday: 16 × 1.25 = 20 liters

Friday: 15 × 1.25 = 18.75 liters

Saturday: 10 × 1.25 = 12.5 liters

Total flavored milk produced = 20 + 11.25 + 13.75 + 20 + 18.75 + 12.5 = 96.25 liters

Therefore, the amount of flavored milk produced from Monday to Saturday is 96.25 liters

90. Answer: D

Solution

Total milk sold = 386 liters

Total milk produced = 463 liters

Unsold milk = Total milk produced – Total milk sold = 463 – 386 = 77 liters

Percentage of unsold milk

$= \frac{\text{Unsold milk}}{\text{Total milk produced}} \times 100$

$= \left(\frac{77}{463}\right) \times 100 \approx 16.63\%$

91. Answer: E

Solution

TSC: Number of officers in TSC

= 15000 × 12% = 15000 × 0.12 = 1800 officers

INFI: Number of officers in INFI

= 20000 × 11% = 20000 × 0.11 = 2200 officers
ANADI: Number of officers in ANADI
= 18000 × 15% = 18000 × 0.15 = 2700 officers
ATAT: Number of officers in ATAT
= 16000 × 14% = 16000 × 0.14 = 2240 officers
JOI: Number of officers in JOI
= 25000 × 9% = 25000 × 0.09 = 2250 officers
Total number of officers
= 1800 + 2200 + 2700 + 2240 + 2250 = 11,190 officers
Therefore, the total number of officers in all the companies is 11,190

92. Answer: A

Solution

From the last question we know that,
The total number of officers in all the companies is 11,190
Total number of employees across all the companies = 15000 + 20000 + 18000 + 16000 + 25000 = 94000
∴ Number of workers= 94,000 – 11,190 = 82810

93. Answer: D

Solution

Total employees in ATAT = 16000
Total officers in ATAT = 16000 × 0.14 = 2240
Number of female officers in ATAT
= 2240 × 0.46 = 1030.4
Since we can't have a fraction of a person, we can round the number to the nearest whole number:
Approximately, the number of female officers in ATAT is 1030

94. Answer: B

Solution

JOI officers
= 9% of 25,000 = 0.09 × 25,000 = 2,250 officers ANADI officers
= 15% of 18,000 = 0.15 × 18,000 = 2,700 officers
Next, we'll calculate the number of non-officers in each company:
JOI non-officers = 25,000 – 2,250 = 22,750 non-officers
ANADI non-officers = 18,000 – 2,700 = 15,300 non-officers
Number of female officers in JOI
= 50% of JOI officers
= 0.5 × 2,250 = 1,125 female officers
Number of female officers in ANADI
= 50% of ANADI officers
= 0.5 × 2,700 = 1,350 female officers
Number of female non-officers in JOI
= 7.5% of JOI non-officers
= 0.075 × 22,750 = 1,706.25 female non-officers (approximated to 1,706)
Number of female non-officers in ANADI
= 7.5% of ANADI non-officers
= 0.075 × 15,300 = 1,147.5 female non-officers (approximated to 1,148)
Therefore, the number of females in JOI and ANADI is as follows:
JOI: Female non-officers: 1,706 Total females in JOI: 1,125 + 1,706 = 2,831
ANADI: Female non-officers: 1,148 Total females in ANADI: 1,350 + 1,148 = 2,498

95. Answer: C

Solution

Let's start by finding the number of officers and non-officers in INFI:
Number of officers in INFI
= 11% of 20,000 = 0.11 × 20,000 = 2,200
Number of non-officers in INFI = Total employees in INFI – Number of officers in INFI
= 20,000 – 2,200 = 17,800
Next, we can calculate the number of employees laid off:
Number of officers laid off = 45% of Number of officers in INFI = 0.45 × 2,200 = 990
Number of non-officers laid off = 25% of Number of non-officers in INFI = 0.25 × 17,800 = 4,450
Finally, we can find the total number of employees laid off by INFI:
Total number of employees laid off = Number of officers laid off + Number of non-officers laid off = 990 + 4,450 = 5,440
Therefore, the number of employees laid off by INFI is 5,440

96. Answer: A

Solution

To calculate the total revenue earned by ATAT during the course of these 5 years, you need to sum up the revenue for ATAT for each year. Here's the calculation:
Total revenue earned by ATAT
= 2013 revenue + 2014 revenue + 2015 revenue + 2016 revenue + 2017 revenue
= 1540000 + 1560000 + 1820000 + 1680000 + 2100000

= 8700000

Therefore, the total revenue earned by ATAT during the course of these 5 years is 8,700,000 INR

97. Answer: E

Solution

We know that: loss = expense – revenue

And, we are given that in 2013, the losses incurred by IFNI are 0.25 times its revenue. Mathematically, we can write this as:

0.25 × revenue = expense – revenue

Simplifying the above equation, we get:

expense = 1.25 × revenue

To find the expenses of IFNI in 2013, we need to know the revenue of IFNI in 2013. From the given table, we can see that the revenue of IFNI in 2013 is 990000.

Therefore, the expenses of IFNI in 2013 can be calculated as:

expense = 1.25 × revenue = 1.25 × 990000 = 1237500

Hence, the expenses of IFNI in 2013 were INR 1237500

98. Answer: B

Solution

To calculate the profit/loss made by ANADI in the five years, we need to first calculate the total revenue earned by the company during this time period.

The total revenue for ANADI can be found by adding the revenue earned by the company in each of the five years:

Total Revenue = Revenue in 2013 + Revenue in 2014 + Revenue in 2015 + Revenue in 2016 + Revenue in 2017

Total Revenue = 1100000 + 1440000 + 2470000 + 2660000 + 3000000

Total Revenue = 10670000

Now we can calculate the profit/loss by using the formula:

Profit/Loss = Total Revenue – Total Expenses

Given that the total expenses during the time period is INR 5,000,000, we have:

Profit/Loss = 10670000 – 5000000

Profit/Loss = 5670000

Therefore, the profit/loss made by ANADI in the five years is INR 7,670,000 (rounded to the nearest thousand). Since this value is positive, it means that the company made a profit during this time period

99. Answer: D

Solution

To determine the revenue of TCS and ATAT for the term 2015–2017 if they decide to merge their businesses, we need to add their revenues for each respective year within that timeframe.

Given revenue values in INR:

2015: TCS: 1300000 ATAT: 1820000

2016: TCS: 1820000 ATAT: 1680000

2017: TCS: 1950000 ATAT: 2100000

To find the merged revenue, we add the revenues of TCS and ATAT for each year within the specified term:

2015–2017 Merged Revenue: = (TCS 2015 revenue + ATAT 2015 revenue) + (TCS 2016 revenue + ATAT 2016 revenue) + (TCS 2017 revenue + ATAT 2017 revenue) = (1300000 + 1820000) + (1820000 + 1680000) + (1950000 + 2100000)

Calculating the above expression:

= 3120000 + 3500000 + 4050000 = 10670000 INR

Therefore, the merged revenue of TCS and ATAT for the term 2015–2017 would be 10,670,000 INR

100. Answer: A

Solution

The revenue of ANADI over the five years

= 110,000 + 144,000 + 247,000 + 266,000 + 300,000

= 1,067,000

DI: CASELETS SOLUTIONS

1. **Answer** – E

Solution

Let the normal consumption of petrol = 4x litres per kilometre

While going Uphill, consumption of petrol = 5x litres per km (While going upwards

(uphill) the consumption of petrol was increased by 25% of the normal consumption of petrol)

While going downhill, consumption of petrol = 2x litres per kilometre (while going

downwards (downhill) the consumption of petrol was decreased by 50% of the normal consumption of petrol)

The total distance between P and Q = 525 KM

Let the total distance travelled by him downhill = d km then, the total distance travelled by him uphill = 2.5d km

According to the question,

2.5d + d + 140 = 525

By solving, d = 385 = 110 km 3.5

Total uphill distance = 110 × 2.5 = 275 km

Total downhill distance = 110 km

While going from the Point P to point Q, the car will consume total petrol of

5x × 275 + 2x × 110 + 4x × 140 litres

= 2155x litres ···(I)

While coming from point Q to point P, plane surface will be plane only but downhill

distance will become uphill and the uphill distance will become downhill then plane

surface distance = 110 km

Downhill distance = 275 km, uphill distance = 110 km

The total consumption of petrol while coming back from the point Q to point P

= 2X ×275 + 5X × 110 + 4X × 140 = 1660x litres ··· (II)

According to the question, while coming back from the point Q to point P, he saves 7

litres of petrol

It means, 2155x – 1660x = 15 litres

x = $\frac{15}{495}$ = $\frac{1}{33}$

Solution:

=2x litre per kilometre = 2

litre per kilometre 33 = 1 litre per 16.5 kilometres

Hence, option E is correct.

2. **Answer** – D

Solution

The total petrol consumption while going and coming back

= $\frac{2155}{33}$ + $\frac{1660}{33}$ = $\frac{3815}{33}$ litres

The mileage of car on the plane surface = 4x litre per km

= 4 × $\frac{1}{33}$ litre per kilometre

While going and coming back, the total distance = 525 × 2 = 1050 km

1 km = $\frac{4}{33}$ litre

1050 km = 1050 × $\frac{4}{33}$ litre = $\frac{4200}{33}$ litres

Reqd. difference = $\frac{4200}{33}$ – $\frac{3815}{33}$ = $\frac{385}{33}$ litres

= 11.67 litres

Hence, option D is correct.

3. **Answer** – E

Solution

The total petrol consumption while going and coming back.

= $\frac{2155}{33}$ + $\frac{1660}{33}$ = $\frac{3815}{33}$ litres = 115.6 litres

Hence, option E is correct.

4. **Answer** – D

Solution

While going from Point A to point B, Distance = 275 km uphill + 110 km downhill + 140 km on the place surface -------- (I)

While coming back from the point Q to point P

Distance = 140 km on the plane surface + 110 km uphill + 275 km downhill -------(ii)

The total distance while going and coming back = 280 km on the plane surface + 385 km uphill + 385 km downhill (by adding equation (I) and equation (ii))

On the plane surface, the speed of car = 55 km per hr

On uphill, the speed of the car = 75% of 55 = 41.25 km per hour

On downhill, the speed of the car = 150% of 55 = 82.50 km per hour

The total time taken = $\frac{280}{55}$ + $\frac{385}{41.25}$ + $\frac{385}{82.50}$

= 5.09 + 9.33 + 4.67 = 19.09 hours approximately

Hence, option D is correct.

5. **Answer** – A

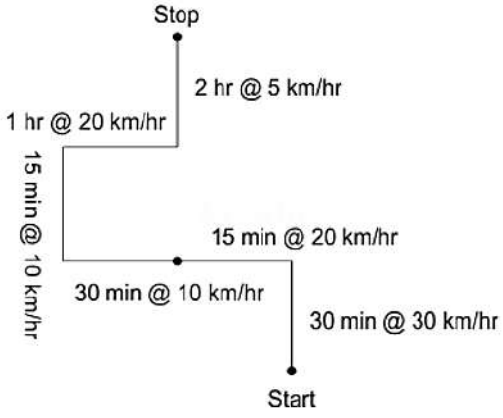
Solution

The required difference = 5x – 2x = 3x = 3/33 = 1/11 litres per kilometres = 1 litres per 11 kilometres

Hence, option A is correct.

6. **Answer** – A

Solution



15 KM + 5 KM + 5 KM + 2.5 KM + 20 KM + 10 KM = 57.5 km

Hence, option A is correct.

7. **Answer** – B

Solution

Total distance = 57.5 km

Total time = 30 min + 15 min + 30 min + 15 min + 1 hours + 2 hours = 4.5 hours

Average speed = $\frac{\text{distance}}{\text{time}} = \frac{57.5}{4.5}$

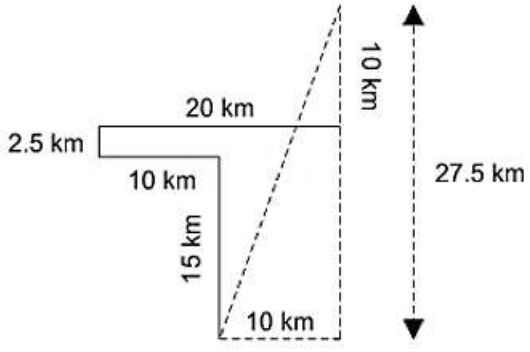
= $\frac{115}{9}$ km / hr = $12\frac{7}{9}$ km per hour

Hence, option B is correct.

8. **Answer** – D

Solution

The total time taken by the Pratik = 4.5 hrs.



And the shortest distance would have been

$\sqrt{27.5^2 + 10^2}$

= $\sqrt{756.25 + 100}$

= approximately 29.26 km

= approximately 29 km @ 30 km per hour

= approximately 58 min

The required difference

= 4.5 hours – 58 minutes

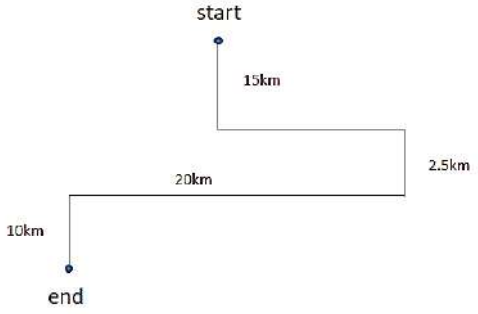
= 3 hours 32 minutes

Hence, option D is correct.

9. **Answer** – C

Solution

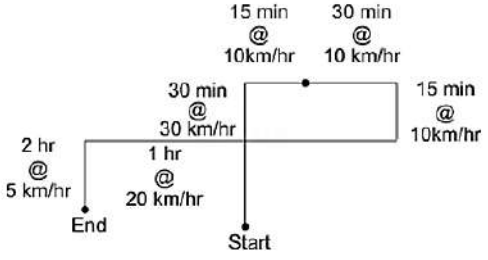
27.5 km towards south and 10 km towards west

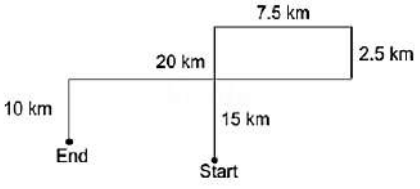


10. **Answer** – D

Solution

From the diagram, it is clear that the end point is 12.5 km towards west and 2.5 km towards north





Hence, option D is correct.

11. **Answer** – C

Solution

In the year 2002, 30% of the population was affected by malaria out of which 10% were employees.

∴ The number of employees affected by malaria in the year 2007

= 10% of 30% of 10000

= 0.1 × 0.3 × 10000 = 300
Hence, option C is correct.

12. **Answer** – D
Solution
The number of employees, students and labourers were in the ratio 20: 11: 9 in each year.
Let the common factor be x.
Also, every year 10000 people were surveyed.
∴ 20x + 11x + 9x = 10000
∴ x = 25
∴ The total number of employees, students and labourers was 5000, 2750 and 2250 respectively.
Now, in the year 2004, 45% of the total population was affected by malaria.
45% of 10000 = 4500
Out of the 4500 affected people, 30% were labourers.
30% of 4500 = 1350
Hence, the numbers of labourers who were not affected by malaria in the year 2004
= 2250 – 1350 = 900
Hence, option D is correct

13. **Answer** – C
Solution
Total population of students for each year = 2750
In the year 2001, the numbers of students affected by malaria = 60% of 40% of 10000
= 0.6 × 0.4 × 10000 = 2400 students
∴ The number of students not affected by malaria = 2750 – 2400 = 350
∴ Difference between the two
= 2400 – 350 = 2050

14. **Answer** – B
Solution
The number of employees affected by malaria in the year 2000 = 10% of 30% of 10000 = 0.1 × 0.3 × 10000 = 300
The number of employees affected by malaria in the year 2003
= 10% of 20% of 10000
= 0.1 × 0.2 × 10000 = 200
The required ratio = 300: 200 = 3: 2

15. **Answer** – D
Solution
Total number of students = 2750
The number of students affected by malaria in the year 2000
= 60% of 30% of 10000 = 1800
∴ The number of students not affected by malaria
= 2750 – 1800 = 950
The number of students affected by malaria in the year 2001
= 60% of 40% of 10000 = 2400
∴ The number of students not affected by malaria
= 2750 – 2400 = 350
The number of students affected by malaria in the year 2002
= 60% of 30% of 10000 = 1800
∴ The number of students not affected by malaria
= 2750 – 1800 = 950
The number of students affected by malaria in the year 2003
= 60% of 20% of 10000 = 1200
∴ The number of students not affected by malaria
= 2750 – 1200 = 1550
The number of students affected by malaria in the year 2004
= 60% of 45% of 10000 = 2700
∴ The number of students not affected by malaria
= 2750 – 2700 = 50
Thus, 2003 had the maximum number of students not affected by malaria.

16. **Answer** – B
Solution
Total products sold in March = 1800
Number of tables sold in March is 300 more than Chair.
Chair + chair + 300 = 1800
Chairs in March = 750
Tables in March = 1050
Total products in January
= 4/5 x 1800 = 1440
Chairs in January = $\frac{5}{8}$ ×1440 = 900
Tables in January = $\frac{3}{8}$ ×1440 = 540
Ratio of table in January to chair in April is 3:2
So, chairs in April = $\frac{2}{3}$ ×540 = 360
Total products sold in January is 50% more than sold in April
Total products sold in April
=$\frac{2}{3}$ ×1440 = 960

Tables in April = 960 – 360 = 600

Tables sold in April is 120 less than chair in February

Chairs in February = 600 + 120 = 720

Tables sold in February is 33.333% less than chair.

Tables sold in February

$= 720 - \frac{1}{3} \times 720 = 480$

months	chair	table	total
January	900	540	1440
February	720	480	1200
March	750	1050	1800
April	360	600	960
Total	2730	2670	5400

Solution:

Total number of burgers sold in all months = 900+ 720+ 750+ 360 = 2730

17. **Answer** – A

Solution

Required ratio = 540: 720 = 3: 4

18. **Answer** – E

Solution

Required percentage

$= \left(\frac{750}{600}\right) \times 100 = 125\%$

19. **Answer** – D

Solution

Required percentage change

$= \left(\frac{480-360}{480}\right) \times 100 = 25\%$

20. **Answer** – C

Solution

Required difference = 2730 – 2670 = 60

21. **Answer** – A

Solution

Total number of men $= 4000 \times \frac{3}{5} = 2400$

Total number of women $= 4000 \times \frac{2}{5} = 1600$

∴ Total no. of workers in HR

$= 4000 \times \frac{25}{1000} = 1000$

Activities	Men	Women
Finance	= 2400 × 16/100 = 384	= 384 × 2/3 = 256
Logistics:	= 2400 × 1/5 = 480	= 480 × 60/100 = 288
IT:	2400 × 18/100 = 432	= 1600 × 28/100 = 448
HR:	= 1000 – 256 = 744	= 1600 – 1344* = 256
Marketing:	= 2400 – 2040# = 360	= 1600 × 22/100 = 352

*(448+256+352+288) = 1344 #(384+480+744+432) = 2040

Solution:

HR department has the maximum number of men i.e. 744

22. **Answer** – B

Solution

The number of women in HR department is 256.

23. **Answer** – D

Solution

Reqd % = $\frac{480}{288} \times 100 = 166\frac{2}{3}\%$

24. **Answer** – B

Solution

Reqd % = $\frac{352}{4000} \times 100 = 8.8\%$

25. **Answer** – E

Solution

Total no. of men in finance & HR

= 384 + 744 = 1128

26. **Answer** – D

Solution

2011:

The total runs scored in 2011 were 1800.

The average runs scored against Australia and England was 450 so the total runs scored against Australia and England was 900.

The total runs scored against others

= 1800 – 900 = 900

2012:

The ratio of the total runs scored against Others in 2011 to that of the total runs scored against Others in 2012 is 4 : 3.

So the total runs against Others in 2012

= $\frac{900 \times 3}{4}$ = 675

The total runs scored against Australia and Others = 1800

The total runs scored against Australia

= 1800 – 675 = 1125

In 2013:

The total runs scored in 2013 were 2100.
The sum of the total runs scored against Australia and England is equal to the total runs scored against Others. It means the total runs scored against Others were half i.e. 1050 runs and the sum of the total runs scored against Australia and England was 1050.

Years	Australia	England	Others
2011 (1800)			900
2012	1125		675
2013 (2100)			1050

2011:
The runs scored against England were 1/3rd of the runs against Others in 2012.
So the total runs scored against England were
$\frac{675}{3} = 225$
The total runs scored against Australia
= 900 – 225 = 675
2013:
The total runs scored against Australia were twice of the runs scored against England in 2011.
The total runs scored against Australia
= 225 × 2= 450
The total runs scored against England
= 1050 – 450=600
2012:
The total runs scored against England in 2012 were equal to the total runs scored against England in 2013.
The total runs scored against England = 600

Years	Australia	England	Others
2011 (1800)	675	225	900
2012 (2400)	1125	600	675
2013 (2100)	450	600	1050

Solution:
The total runs scored in 2012 were 2400.
Hence, option D is correct.

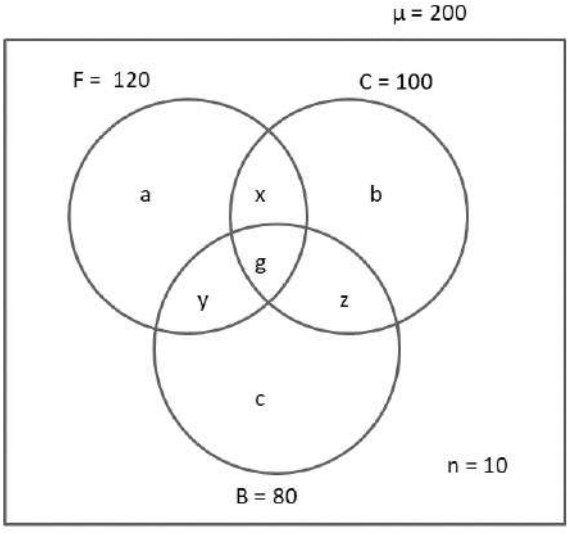
27. **Answer** – C
Solution
The total runs scored against England in all three years = 225 + 600 + 600 = 1425

28. **Answer** – B
Solution
The total runs scored against Australia in 2011 = 675
The total runs scored against England in 2013 = 600
So, required ratio = 675 : 600 = 9 : 8
Hence, option B is correct.

29. **Answer** – A
Solution
The total runs scored against Others in 2011 = 900
The total runs scored against Others in 2012 = 675
So, required difference = 900 – 675 = 225
Hence, option A is correct.

30. **Answer** – E
Solution
The total runs scored against Australia in 2012 = 1125
The total runs scored against Australia in 2013 = 450
So,
Reqd % = $\frac{1125}{450} \times 100 = 250\%$
Hence, option E is correct.

31. **Answer** – C
Solution
The given information can be represented in the following venn diagram.



C = Cricket
F = Football
B = Basketball
It is given that, a + b + c = 100
a + b + c + x + y + z + g + n = μ = 200

100 + (x + y + z) + g + 10 = 200

x + y + z + g = 90 ...(1)

C+F+B = (a + b + C. + 2 (x + y + z) + 3g = 300

→ 2 (x + y + z) +3g = 200 ...(2)

From (1) and (2), we get g = 20

x + y + z = 70

Solution:

The number of people who had participated in exactly two of three = 70

Hence, option C is correct.

32. **Answer** – E

Solution

It is given that x = 20

y + z = 50

The number of people who had only participated in basketball

= 80 – 50 – 20 = 10

Hence, option E is correct.

33. **Answer** – B

Solution

15 people who had participated in football and had participated in basketball also, value of 'a' reduces by 15 and value of 'y' increase by 15.

5 people who participated in cricket and basketball and football also.

i.e., value of 'z' decreases by 5 and that of g increases by 5. The number of people who had at least two of the three items

→ x + y + z + g = x + (y + 15) + (z – 5) + (g + 5)

→ x + y + z + g + 15 = 70 + 20 + 15 = 105

Hence, option B is correct.

34. **Answer** – D

Solution

It is given that b = 30

→x + z = IC – b – g = 100 – 30 – 20 = 50

As, a + b + c = 100,

a + c + y = 70 + 20 = 90

Hence, option D is correct.

35. **Answer** – C

Solution

We need to find the maximum value of a.

a can be maximum when x + y is minimum.

x + y can be minimum when z is maximum.

As g = 20 and y + g + z + c = 80

Z_{max} = 60 (c_{min} = 0)

As x + y + z = 70, $x_{min} + y_{min}$ = 10

a_{max} = CD – y_{min} – x_{min} – g

→120 – 10 – 20 = 90

Hence, option C is correct.

36. **Answer** – C

Solution

Year	Investment by Venture Capitalists		
	Arun	Binod	Chirag
2003	66000	54000	60000

Ratio of profit = 66000: 54000: 60000

Ratio of profit = 66: 54: 60

So, the profit shared by the venture capitalist would be in the ratio of

66: 54: 60

Share of Binod = $\frac{54}{180} \times 22500 = 6750$

Hence, option C is correct.

37. **Answer** – A

Solution

2005	Investment	Profit	Months
Arun	84000	18900	24
Binod		16800	16
Chirag	96000	25200	

Let A and B be the investment made by Arun and Binod respectively.

$\frac{24A}{16B} = \frac{18900}{16800}$

$\frac{12A}{8B} = \frac{189}{168}$

$\frac{A}{B} = \frac{189 \times 8}{12 \times 168} = \frac{3}{4}$

∴ investment of Arun = $\frac{3}{7} \times 84000 = 36000$

So, the investment made by Binod = 48000

Let, Chirag invested for C months

So, the ratio of Arun and Chirag 's profit

$\frac{36000 \times 24}{96000 \times C} = \frac{18900}{25200}$

∴ C = 12

Hence, option A is correct.

38. **Answer** – B

Solution

Year	Investment		Profit	
	Arun	Chirag	Arun	Chirag
2001	48000	33000	A	11550
2002	72000	33000	B	13200

For the year 2001,

$\frac{48000}{33000} = \frac{A}{11550}$; $A = 16800$

For the year 2002,

$\frac{72000}{33000} = \frac{A}{13200}$; $B = 28800$

So, the ratio of profits of Arun

$\frac{16800}{28800} = \frac{168}{288} = \frac{28}{48} = \frac{7}{12}$

Hence, option B is correct.

39. **Answer** – C

Solution

For the year 2004,

Profit of Chirag

$= \frac{12000}{10500} = \frac{6000}{C}; C = 7$

For the year 2004,

Profit of Chirag

$= \frac{12000}{10500} = \frac{6000}{C}, C = \frac{7 \times 6000}{8} = 5250$

So, amount of Profit shared by Chirag in 2005,

$= 5250 \times \frac{3}{4} = 3937.5$

40. **Answer** – B

Solution

Year	Investment	
	Binod	Chirag
2002	45000	33000

For the year 2006,

Profit of Binod

$= \frac{8}{100} \times 45000 = Rs.3600$

For the year 2006,

Profit of Chirag

$= \frac{10}{100} \times 33000 = Rs.3300$

So, the ratio of profit of Chirag in 2006 to that of Binod in 2006

$\frac{3300}{3600} = \frac{33}{36} = \frac{11}{12}$

Hence, option B is correct.

41. **Answer** – D

Solution

Total number of students = 2800

Number of boys = $\frac{4}{7} \times 2800 = 1600$

Number of girls = 2800 – 1600 = 1200

Number of boys enrolled in Hockey = 306

Number of students enrolled in Basketball = 32% of 2800 = 896

Number of girls enrolled in Basketball = 285

Number of boys enrolled in Basketball

= 896 – 285 = 611

Number of boys enrolled in Volleyball

= 12.5% of 1600 = 200

Number of girls enrolled in Football

= 285 + 75 = 360

Number of students enrolled in Hockey = 408

Number of girls enrolled in hockey

= 408 – 306 = 102

Number of boys enrolled in Cricket and Football together

= 1600 – (200 + 306 + 611) = 483

Number of boys enrolled in cricket =

Number of girls enrolled in cricket

= 216 + 93 = 309

Number of boys enrolled in football

= 483 – 216 = 267

Number of girls enrolled in volleyball

= 1200 – (309 + 360 + 102 + 285) = 144

Activity	Number of Boys	Number of Girls	Total number of students
Cricket	216	309	525
Football	267	360	627
Volleyball	200	144	344
Hockey	306	102	408
Basketball	611	285	896

Solution:

Difference in the number of boys and girls who are enrolled in Hockey = (306 – 102) = 204

So, reqd. % = $\frac{204 \times 100}{344} = 59.3 \approx 59\%$

Hence, option D is correct.

42. **Answer** – A

Solution

reqd. % = $\frac{525}{2800} \times 100 = 18.75\%$

43. **Answer** – B

Solution

Required ratio = 267: 360 = 89: 120

Hence, option B is correct.

44. **Answer** – E

Solution

$285 = \frac{x}{100} \times 896$

$\therefore$ Reqd. % = $\frac{285 \times 100}{896} = 31.8 \approx 32\%$

45. **Answer** – C

Solution

The required number of girls who are enrolled in Volleyball = 144

46. **Answer** – D

Solution

It is given that the total number of cars is 1080.

4-star cars = 2 × (3-star cars)

5-star cars = 3 × (4-star cars)

Let, 3-star cars be M, 4-star cars be N and 5-star cars be P.

N = 2M

P = 3N

M + 2M + 6M = 1080

9M = 1080

M = 120

N = 240

P = 720

Total 300 cars listed on site X.

Out of which, 30% are 3 stars.

90 cars are in 3-star category on Site X.

Total 5-star cars are 720.

Ratio of the cars on site X, Y and Z is 1:1:2.

4x = 720

x = 180

The number of 5-star cars on Y website is 20% more than number of 4-star cars on the same website.

Number of 5 Star Cars on site Y = 180

So, the number of 4-star cars on site Y would be 150.

Total 4-star cars are 240.

So, 4-star cars on site C will be

240 – 30 – 150 = 60

The number of 3-star cars on website Y and Z are same.

Total 120

So, 3-star and 4-star cars on site Y and Z should be 15.

Car/ Site	X	Y	Z	
3- Star	90	15	15	120
4- Star	30	150	60	240
5- Star	180	180	360	720
Total	300	345	435	1080

Solution:

Total number of 4-star cars from Site A and C together are 60

Hence, option D is correct.

47. **Answer** – C

Solution

3-star Cars on site X = 90

4-star Cars on Site Z = 60

Difference = 30

Hence, option C is correct.

48. **Answer** – E

Solution

4- Star Cars on Site B = 150

Total Cars on Site A = 300

Reqd. % = $\frac{150}{300} \times 100 = 50\%$

Hence, option E is correct.

49. **Answer** – E

Solution

Following the common explanation, we get

Total number of Cars listed on site C is 435.

Hence, option E is correct.

50. **Answer** – A

Solution

Following the common explanation, we get

3-star cars on site D is 50% more than number of 4 star cars on site X

3-star cars on Site D = 150% of 30 = 45

Total Cars on site D = 750

Out of Which 50% are 4-star = 375

Number of 4-star cars on site D = 750 – 375 – 45 = 330

Hence, option A is correct.

51. **Answer** – D

Solution

Let the number of employees who arrived early = 5x

The number of employees who left early

= 20% of 5x = x

The number of employees who left late

= 40% of 5x = 2x

The number of employees who left on time
= 5x – 3x = 2x
Let the number of employees who arrived late at the office = 4z
The number of employees who left late
= 50% of 4z = 2z
The number of employees who left on time =25% of 4z = z
The number of employees who left early
= 4z – 3z = z
Let the number of employees who arrived on time = 8y
The number of employees who left early
= 37.5% of 8y = 3y = The number of employees who left late
The number of employees who left on time
= 8y – 6y = 2y

	Early	On time	Late
Arrived	5x (assume)	8y (assume)	4z (assume)
Left	X + 3y + z	2x + z + 2y	2x + 2z + 3y

According to the question,
5x = 2x + z + 2y
3x = z + 2y ------- (i)
The number of employees who didn't arrive on time = x + 3y + z + 2x + 2z + 3y = 288
3x + 3z + 6y = 288
From the equation (i), 9x = 3z + 6y ----- (ii)
Therefore, 3x + 9x = 12x = 288
X = 24
Again, according to the question,
x + 3y + z = 4z + 78
3y – 3z = 54 ---------- (iii)
Adding equation (ii) and equation (iii)
9y = 9x + 54
Y = x + 6 = 24 + 6 = 30
From the equation (iii)
3z = 90 – 54 = 36
Z = 12

Solution

The following common explanation, we get

	Early	On time	Late
Arrived	5x (assume)	8y (assume)	4z (assume)
Left	X + 3y + z	2x + z + 2y	2x + 2z + 3y

the total number of employees who left early = X + 3Y + Z = 24 + 90 + 12 = 126
the total number of employees who left late = 2X + 2Z + 3Y = 48 + 24 + 90 = 162
The required difference = 162 – 126 = 36
Hence, option D is correct.

52. **Answer** – A

Solution

The total number of employees working in that branch = 5x + 8y + 4z = 120 + 240 + 48 = 408
Hence, option A is correct.

53. **Answer** – C

Solution

The respective ratio = 5x : 8y : 4z = 120 : 240 : 48 = 5 : 10 : 2
Hence, option C is correct.

54. **Answer** – B

Solution

The total number of employees working in that branch = 5x + 8y + 4z = 120 + 240 + 48 = 408
of the total number of employees was on leave on the medical ground = 25% of 408 = 102
Remaining = 408 – 102 = 306
The number of employees who was on leave for personal reason = 33.33% of 306 = 102
The number of employees present on the day before yesterday of that day = 306 – 102 = 204
Hence, option B is correct

55. **Answer** – C

Solution

The following common explanation, we get
The number of employees who left on time
= 2x + z + 2y = 48 + 12 + 60 = 120
The number of employees who didn't leave on time
= x + 3y + z + 2x + 2z + 3y
= 3x + 6y + 3z = 72 + 180 + 36 = 288
The reqd. % = $\frac{(288 - 120) \times 100}{288}$
= $\frac{168 \times 100}{288}$ = 58.33% approx.
Hence, option C is correct

56. **Answer** – B

Solution

Let the total population of India in 2011 = x million
then
20% of x million = 150 million
x = 150 × 5 = 750 million

2% of the total population of India sold products online = 2% of 750 million = 15 million

Hence, option B is correct

57. **Answer** – C

Solution

Let the total population of India in 2011 = x million then

20% of x million = 150 millions

x = 150 × 5 = 750 millions

2% of the total population of India sold products online = 2% of 750 million = 15 million

In 2012, the number of sellers remained constant then in 2012, the revenue per sellers

$= \frac{75 \text{ billion}}{10 \text{ million}} = \frac{75 \text{ x } 1000}{10} = 7500 \text{ million}$

= 7.5 billion = revenue per seller in 2011

Hence, option C is correct

58. **Answer** – A

Solution

In 2011, 150 million people bought products online

In 2012, 120% of 150 = 180 million people brought products online

In 2013, 130% of 180 = 13 × 18 = 234 million people will buy products online

Hence, option A is correct.

59. **Answer** – E

Solution

Let the total population of India in 2011 = x million then

20% of x million = 150 millions

x = 150 × 5 = 750 millions

The reqd. % = $\frac{(1350 - 750) \times 100}{750}$ = $\frac{600\ x\ 100}{750}$ = 80%

Hence, option E is correct

60. **Answer** – A

Solution

Let the total population of India in 2011 = x million then

20% of x million = 150 millions

x = 150 × 5 = 750 millions

The population of India in 2012

= 110% of 750 = 825 million

The population of India in 2013

= 105% of 825 million = 866.25 million

In 2013, because of JIO, 40% of the total population of India will buy product online

= 40% of 866.25

$= 40\%\ of \frac{866.25}{100}$

= 346.5 million

Hence, option A is correct.

61. **Answer** – C

Solution

Total number of peoples = 8000

Number of peoples live in Grey flat = 2200

Number of peoples live in Red, Black and Purple flat = 8000 – 2200 = 5800

The ratio of the number of people who live Red and Black colour flat in the ratio of 2:3 and the ratio of the number of people live Black to Purple colour flat is 4:3.

Ratio of the number of peoples live in Red, Black and Purple flat = 8:12:9

Number of people living in red flat

$= \frac{8}{29} \times 5800 = 1600$

Number of people living in Black flat

$= \frac{12}{29} \times 5800 = 2400$

Number of people living in purple flat

$= \frac{9}{29} \times 5800 = 1800$

Number of males live in red flat

$= \frac{55}{100} \times 1600 = 880$

Number of females live in red flat

$= \frac{45}{100} \times 1600 = 720$

Number of males live in purple flat

$= \frac{4}{9} \times 1800 = 800$

Number of females live in purple flat

$= \frac{5}{9} \times 1800 = 1000$

Number of males live in black flat

$= \frac{3}{2} \times 800 = 1200$

Number of females live in black flat

=2400–1200=1200

Number of males live in grey flat

$= \frac{120}{100} \times 1000 = 1200$

Number of females live in grey flat

= 2200 – 1200 = 1000

Colony	Male	Female	Total
Red	880	720	1600
Black	1200	1200	2400
Grey	1200	1000	2200
Purple	800	1000	1800

Solution:

Required Difference = 1000 – 880 = 120

62. **Answer** – D

Solution

Required sum

= (720 + 1200 + 1000 + 1000) = 3920

63. **Answer** – B

Solution

Number of males who live in purple flat = 800

Number of peoples who live in Black flat

= 2400

Required percentage $= \frac{800}{2400} \times 100 = 33\%$

64. **Answer** – E

Solution

Required percentage

$$= \frac{880 + 1200 + 1200 + 800}{8000} \times 100 = 51\%$$

65. **Answer** – A

Solution

Required ratio = 720: 1200 = 3:5

66. **Answer** – C

Solution

Following the given information we can create a table as follows:

Temples	Total	Only Sanskrit	Only Hindi	Both Sanskrit & Hindi
Vrindavan	20% of 18000 = 3600	30% of 3600 = 1080	1080	40% of 3600 = 1440
Ahmedabad	35% of 18000 = 6300	2500	1260 + 20 = 1280	2/5 of 6300 = 2520
Srirangam	50% of 3600 = 1800	450	50% of 1800 = 900	450
Baroda	3150	910 + 90 = 1000	40% of 3150 = 1260	890
Puri	3150	1260	900 + 80 = 980	910

Total number of HINDU devotees who know both languages

$= 1440 + 2520 + 450 + 890 + 910 = 6210$

Total number of devotees in all cities =18000

$= \frac{6210}{18000} \times 100$

67. **Answer** – B

Solution

Total number of devotees who know Sanskrit

= 1080 + 2500 + 450 + 1000 + 1260

= 6290 + 6210 (from both the languages)

= 12500

Total number of devotees who know only Hindi = 1080 + 1280 + 900 + 1260 + 980 = 5500

Reqd. difference = 12500 – 5500 = 7000

68. **Answer** – D

Solution

Total number of Puri HINDU temple devotees who know only Sanskrit= 1260

Total number of Vrindavan Hindu temple devotees who know both the languages

=1440

Required answer $= \frac{1260}{1440} = 0.875$

69. **Answer** – E

Solution

Total number of devotees from Vrindavan temple who know both languages =1440

Total number of devotees from Srirangam temple who know both the languages= 450

= 1440 + 450= 1890

Total number of devotees from Baroda temple

= 3150

Required ratio= $\frac{1890}{3150} = \frac{3}{5} = 3:5$

70. **Answer** – D

Solution

Ahmedabad temple has the maximum difference between the no. of devotees who know only Sanskrit and only Hindi.

71. **Answer** – A

Solution

Let the marked price of mixer = 100x

Then, The amount Rohan paid

= (100 – 10)% of 100x = 90% of 100x = 90x

The amount Roshani will pay

= 90% of 80% of 100x = 72x

The amount Ritika will pay

= 90% of 80% of 75% of 100x = 54x

According to the question,

72x – 54x = 18x = 720

x = 40

Solution:

Total marked price of 3 mixers

= 4000 × 3 = 12000

The total money paid by them

= 90x + 72x + 54x = 216x = 8640

the required %= $\frac{8640\times10}{12000} = 72\%$

Hence, option A is correct.

72. **Answer** – D

Solution

Amount paid by Rohan= 90x

The amount paid by Ritika= 54x

Required %= $\frac{90x-54x}{54x} \times 100 = 66.66\%$

73. **Answer** – B

Solution

The amount paid by Rohan = 90x

The amount paid by Ritika = 54x

The required ratio = 90x : 54x = 5 : 3

Hence, option B is correct

74. **Answer** – D

Solution

The amount Rohan paid = (100 – 10) % of 100x = 90% of 100x = 90x = 90 × 40 = 3600

The money left with him = 5000 – 3600 = 1400

Hence, option D is correct.

75. **Answer** – E

Solution

MP = 100X = 100 × 40 = 4000

Hence, option E is correct.

76. **Answer** – B

Solution

Total number of followers = 600

And the given ratio of Male to Female = 7 : 5,

Therefore, man will be 350 and female will be 250.

	Followers	
	Male (350)	Female (250)
Only Superstar 1	10% of 350 = 35	18% of 250 = 45
Only Superstar 2	20% of 350 = 70	10% of 250 = 25
Only Superstar 3	12% of 350 = 42	12% of 250 = 30
Only Superstar 1 & 3	10% of 350 = 35	20% of 250 = 50
Only Superstar 3 & 2	18% of 350 = 63	12% of 250 = 30
Only Superstar 1 & 2	20% of 350 = 70	8% of 250 = 20
All the Superstars	350 - (35 + 70 + 42 + 63 + 35 + 70) = 35	250 - (45 + 25 + 30 + 50 + 30 + 20) = 50

Solution:

Following the common explanation, we get

The number of male followers who follow Superstar2 = 70 + 63 + 70 + 35 = 238

The number of female followers who follow Superstar1 = 45 + 50 + 20 + 50 = 165

Required ratio= $\frac{238}{165} = 238:165$

Hence, option B is correct.

77. **Answer** – A

Solution

Number of male followers who follow less than 2 superstars

= 35 + 70 + 42 = 147

Total number of female followers who follow more than 1 superstars

= 30 + 50 + 20 + 50 = 150

Required %= $\frac{147}{150} \times 100 = 98\%$

78. **Answer** – D

Solution

Total number of female followers who follow all the Superstars = 50

And the number of male followers who follow all the Superstars = 35

Reqd. ratio = 50: 35 = 10: 7

Hence, option D is correct.

79. **Answer** – B

Solution

The total number of female followers of only super star 3= 30

Total number of male followers following Superstar 1 only= 35

Required%= $\frac{35-30}{35} \times 100 = \frac{500}{35} \approx 14\%$

80. **Answer** – E

Solution:

Total number of male followers following only Superstar 2= 70

Total number of female followers following superstar3 and superstar1= 30 and 45

Required %= $\frac{70}{30+45} \times 100 = 93\frac{1}{3}\%$

81. **Answer** – A

Solution

Let the Population of Town P in first year be 100.

Thus, population of town P in third year = 105% of 107.50% of 100 = 112.875 i.e.

135450.

∴ Population of Town A in first year

= $\frac{135450 \times 100}{112.875}$= 120000

Thus, population of town P in second year = 105% of 120000 = 126000

Population of town Q in second year = 150% of 120000 = 180000

As given, growth rate of population for town Q in the second year was 25%, thus

population in first year

$= \frac{180000 \times 100}{125} = 144000$

As growth year became half of previous years' growth rate, Population of town Q in third

year

= 180000 + [180000 × 12.50% (half of 25%)]

= 180000 + 22500

= 202500

For town R, population in second year = Population density × Area = 250 × 1250 = 312500

As growth rate for town C was 11.11% and 10% for second and third year respectively,

population of C in first year

$= \frac{312500 \times 100}{111.11} = 281250$

Population of R in third year

= 110% of 312500 = 343750.

Thus, we can present above data in tabular form as follows:

Towns	Population		
	First Year	Second Year	Third Year
P	120000	126000	135450
Q	144000	180000	202500
R	281250	312500	343750

Solution:

Required difference = Population of town Q in third year – Population of town P in second year

= 202500 – 126000 = 76500

Hence, option A is correct.

82. **Answer** – D

Solution

Average population of town Q

$= \frac{144000 + 180000 + 202500}{3} = \frac{526500}{3}$

$= 175500$

Average population of town R

$= \frac{281250 + 312500 + 343750}{3} = \frac{937500}{3}$

$= 312500$

∴ Reqd. % = $\frac{175500}{312500} \times 100 = 56.16\%$

Hence, option D is correct.

83. **Answer** – E

Solution

Number of males in town Q for second year

$= \frac{7 \times 180000}{12} = 105000$

Number of males in town Q for third year

$= \frac{7 \times 202500}{12} = 118125$

Number of illiterate men in second year

$= \frac{1 \times 1050000}{5} = 21000$

Number literate men in third year

$= \frac{4 \times 118125}{5} = 94500$

Thus, the required ratio = 21000:94500

= 2:9

84. **Answer** – B

Solution

Number of illiterate male in third year for town Q

$= \frac{1 \times 118125}{5} = 23625$

Number of female in third year for town Q

$= \frac{5 \times 202500}{12} = 84375$

∴ Reqd. % = $\frac{84375 - 23625}{84375} = 72\%$ 84375

Hence, option B is correct.

85. **Answer** – D

Solution

Population above 20 years in town P

$= 135450 - \frac{135450 \times 3}{8} = 84656$

Population above 20 years in town Q

= (100 – 33)% of 202500 = 135000

Population above 20 years in town R

= 70% of 343750 = 240625

Thus, required total

= 84656 + 135000 + 240625 = 460281

Hence, option D is correct.

86. **Answer** – A

Solution

Let in the year 2020, The total number of cars of brand A manufactured = 4x then the total number of cars of brand B manufactured in that year = 5x

Let in the year 2021, total number of cars manufactured of brand A = P and that of brand B = Q then according to the question

4x : P = 3 : 2

8x = 3P

$P = \frac{8X}{3}$

= total number of cars manufactured of brand A in

the year 2021

For the brand B,

5x : Q = 3 : 4

20x = 3Q

$Q = \frac{20x}{3}$

= total number of cars manufactured of brand B in the year 2021

Solution:

In the year 2020, The total number of cars of brand A manufactured = 4x = 1800

X= $\frac{1800}{4} = 450$

The total number of cars manufactured of brand A and B in the year 2021

$\frac{8x}{3} + \frac{20x}{3} = \frac{28x}{3} = \frac{28\times450}{3} = 4200$

Let the total number of cars manufactured of brand C in the year 2021 = c then

c = 30% of (4200 + c)

100c = 30 × 4200 + 30c

70c = 30 × 4200

c = 30 × 60 = 1800

87. **Answer** – E

Solution

Following common explanation, we get

The total number of cars of all the brands manufactured in the year 2021

$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + c$

where c = total number of cars manufactured of brand C in the year 2021

c= $30\%\ of(\frac{28x}{3} + c)$

100c-30c=70c= $30 \times \frac{28x}{3}$

c= $\frac{12x}{3}$

the total number of cars of all the brands manufactured in the year 2021

$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + \frac{12x}{3} + \frac{40x}{3}$

the total number of cars of all the brands manufactured in the year 2020 = 4x + 5x = 9x the required percentage increase

$= \frac{\frac{40x}{3} - 9x}{9x} \times 100 = \frac{13}{27} \times 100$

$= 48.15\%$

88. **Answer** – B

Solution

The total number of cars of all the brands manufactured in the year 2021

$= \frac{8x}{3} + \frac{20x}{3} + c = \frac{28x}{3} + c$

where c = total number of cars manufactured of brand C in the year 2021

$305\ of\ (\frac{28x}{3} + c)$

100c-30c=70c= $30 \times \frac{28x}{3}$

c= $\frac{12x}{3} = 900$

$x = \frac{900}{4} = 225$

the total number of cars of all the brands manufactured in the year 2021

$\frac{28x}{3} + c = \frac{28x}{3} + \frac{12x}{3} = \frac{40x}{3} = \frac{225\times40}{3}$

In the next year i.e. in the year 2022,Honda wants to increase its car manufacturing capacity by 25% compare to the previous year

Therefore, in the year 2022, the total number of cars it will manufacture = 125% of 3000 = 3750

It doesn't make ang changes in any brand therefore the total number of brand D cars it will manufacture = 3750 – 3000 = 750

Hence, option B is correct.

89. **Answer** – D

Solution

The total number of cars of brands C manufactured in the year 2021 = 4% of 7000 = 280

The total number of cars manufactured of brand A and B in the year 2021

$= \frac{8x}{3} + \frac{20x}{3} = \frac{28x}{3} = 7000 - 280$

$= 6720$

$x = \frac{6720\times3}{28} = 240 \times 3 = 720$

total cars of brand A manufactured in the years 2020 and 2021 together

$= 4x + \frac{8x}{3} = \frac{20x}{3} = \frac{20\times720}{3} = 4800$

90. **Answer** – C

Solution

20x/3 = total number of cars manufactured of brand B in the year 2021

$= \frac{20x}{3} = 900$

x = 45 × 3 = 135

the total number of cars of all the brands manufactured in the year 2021

$\frac{28x}{3} + c = \frac{28x}{3} + \frac{12x}{3} = \frac{40x}{3}$

the total number of cars of all the brands manufactured in the year 2020 = 4x + 5x = 9x

Required sum

$= 9x + \frac{40x}{3} = \frac{67x}{3} = 67 \times \frac{135}{3} = 45 \times 67 =$

=3015

Hence, option C is correct.

91. **Answer** – C

Solution

Time taken by W1 to complete 20% = 10 minutes

Hence, W1 completes 100% = 50 minutes

Time taken by W2 to complete 10%

= 15 minutes

Hence, W2 completes 100% = 150 minutes

Time taken by W3 worker to destroy 75%

= 60 minutes

Hence, W3 Worker destroys 100% = 80 minutes

Let total capacity of the work

= LCM (50, 150, 80) = 1200 units

Capacity of W1 $= \frac{1200}{50}$ =24 unit

Capacity of W2 $= \frac{1200}{150}$ =8 units

Capacity of destroy worker (W3) $= \frac{1200}{80}$ =15 units

Work done in 1 min= 24+8–15=17 units

Completed work in 14 minutes = 14 × 17 = 238 units

Rest units = 1200 – 238 = 962 units

Capacity of W1 + W2 = 24 + 8 = 32 units

Time taken by W1 and W2 $= \frac{962}{32}$

$= 30.0625\ mins$

Hence, option C is correct.

92. **Answer** – D

Solution

W3 takes time to complete 15% = 45 minutes

Hence, W3 completes 100% = 300 minutes

W4 takes time to complete 30% = 30 minutes

Hence, W4 completes 100% = 100 minutes

Destroy worker destroys 100% = 50 minutes

Let total capacity of the work = LCM (300, 100, 50) = 300 units

Capacity of W3 $= \frac{300}{300} = 1$units

Capacity of W4 $= \frac{300}{100} = 3$ units

Capacity of destroy worker $= \frac{300}{50} = 6$units

Work completed in 10 minutes = 10 × 1 + 10 × 3 = 40 units

Work by W3 + W4 + Destroy = 1 + 3 – 6 = –2 units

Work destroyed in= $\frac{40}{2} = 20\ mins$

Hence, option D is correct.

93. **Answer** – A

Solution

Time taken by W1 to complete 20% = 10 minutes

Hence, W1 completes 100% = 50 minutes

Time taken by W5 to complete 25 %

= 35 minutes

Hence, W5 completes 100% = 140 minutes

Let destroy worker destroys 100% in y minutes

Let total capacity of work

= LCM (50, 140) = 700 units

Capacity of W1 $= \frac{700}{50} = 14$ units

Capacity of W5 $= \frac{700}{140} = 5$ units

Capacity of destroy worker $= \frac{700}{y}$ units

Work completed in 1 min $= \frac{19-700}{y}$ units

Work completed in 50 mins $= 50 \times \frac{19-700}{y}$

$50 \times \frac{19-700}{y} = 700$

19y – 700 = 14y

y = 140 minutes

Hence, option A is correct.

94. **Answer** – C

Solution

W3 takes time to complete 15% = 45 minutes

Hence, W3 completes 100% = 300 minutes

Time taken by W4 to complete 30% = 30 minutes

Hence, W4 completes 100% = 100 minutes

Let capacity of the work

= LCM (150, 100) = 300 units

Capacity of W3 $= \frac{300}{300} = 1$ units

Capacity of W4 $= \frac{300}{100} = 3$ units

Capacity of destroy worker $= \frac{300}{150} = 2$ units

Work completed in 1 minute = 1 + 3 – 2 = 2 units

Work completed in 150 minutes = 300 units

So, the capacity of the work = 300 units

Hence, option C is correct.

95. **Answer** – E

Solution

Time taken by W2 to complete 10% = 15 minutes

Hence W2 completes 100% = 150 minutes

Time taken by W3 to complete 15% = 45 minutes

Hence W3 completes 100% = 300 minutes

Let capacity of work = LCM(150, 300) = 300 units

Capacity of W2 $= \frac{300}{150} = 2$ units

Capacity of W3 $= \frac{300}{300} = 1$ units

Let the total time = t

(W2 + W3)'s capacity = 2 + 1 = 3 units

$\frac{2\times t}{2} + \frac{3\times t}{2}$

5t = 600

t = 120 minutes

Hence, option E is correct.

96. **Answer** – C

Solution

It is given that the second youngest kid is twice the age of the youngest kid whose age is three times less than the oldest kid.

Let the age of youngest kid is 'y', then the second youngest kid would be 2y and the oldest would be 3y.

Weight of oldest kid is 72 kg which is numerically three times more than the age of second oldest kid.

Age of second oldest kid would be 24 years.

Since, the second oldest kid is six year younger than the oldest kid, oldest kid would be 30 years. From this we get 3y = 30, thus y = 10. So the age of youngest kid = 10 years, second youngest kid = 20 years.

Second oldest kid, whose weight is four times the age of second youngest kid

Second youngest kid = 20 years, so weight of second oldest kid = 4 × 20 = 80 kg

Weight of the youngest kid is 40% less than the second oldest kid

Weight of second oldest = 80kg, youngest kid = 80kg – 40% of 80kg = 48kg

Sum of all the weights = 258kg = 72kg + 48kg + 80kg + weight of second youngest kid

Weight of second youngest kid = 58kg

In a table form all the values are:

	Age(years)	Weight(kg)
Oldest kid	30	72
2nd oldest kid	24	80
2nd youngest kid	20	58
Youngest kid	10	48

Solution:

Weights after two years become:

72 + 8 = 80 kg

80 + 4 = 84 kg

58 + 12 = 70 kg

48 + 18 = 66 kg

Total = 300

Average weight $= \frac{300}{4}$

After 2 years, ages would be

(30 + 2), (24 + 2), (20 + 2), and (10 + 2)

32, 26, 22, and 12

Average age $= \frac{32+26+22+12}{4} = \frac{92}{4}$

Ratio $= \frac{300}{4} : \frac{92}{4} = 75:23$

Hence, option C is correct.

97. **Answer** – B

Solution

The formula he used to distribute the chocolates is

$$number\ of\ chocolates = \frac{height\ in\ cm}{weight\ in\ kg + age}$$

For second oldest kid –

$1.5 = \frac{height\ in\ cm}{80+24} = \frac{height\ in\ cm}{104}$a

Height in cm = 104 × 1.5 = 156 cm

For oldest kid –

$1.5 = \frac{height\ in\ cm}{30+72}$

Height in cm = 102 × 1.5 = 153 cm

Ratio = oldest : second oldest

= 153 : 156 = 51 : 52

Hence, option B is correct.

98. **Answer** – D

Solution

It is given the two of them got total of 6 chocolates.

Youngest kid's height is 174 cm, so

$$number\ of\ chocolates = \frac{height\ in\ cm}{weight\ in\ kg + age}$$

Number of chocolates $= \frac{174}{48+10} = 3$

Second youngest height = 174 – 18 = 156 cm

number of chocolates $= \frac{156}{58+20} = 2$

Total chocolates = 6 + 3 + 2 = 11

Hence, option D is correct.

99. **Answer** – A

Solution

Let he bought 'y' pens.

Kid with highest weight(80 kg) $= \frac{y}{2}$pens

Number of pens left $\frac{y}{2}$ pens

Number of pens to 72 kg kid $= \frac{y}{4}$ pens

Number of pens left $= \frac{y}{4}$ pens

Half of it goes to 58 kg kid $= \frac{y}{8}$ pens

Number of pens left $= \frac{y}{8}$ pens

The kid with 48kg weight will get whatever left, so he gets $= \frac{y}{8}$ pens

Since he gets 2 pens, we must have:

$\frac{y}{2} = 8$

$y = 16$ pens

Ratio of weight to the number of pens for the oldest kid

Weight of oldest kid = 72kg,

pens he got $= \frac{y}{4} = \frac{16}{4} = 4$

Ratio = 72 : 4 = 18 : 1

Hence, option A is correct.

100. **Answer** – D

Solution

After 5 years, oldest kid = 30 + 5 = 35 years, and youngest kid = 10+5 = 15 years.

Weight of youngest kid = 48kg + 25% of 48 kg = 50kg

Weight of oldest kid = 2 × weight of youngest kid = 2 × 50 = 100kg

Let the youngest kid gets 'y' chocolates, then the oldest will get (2 – y) chocolates.

Now, let their heights be 'H'

Number of chocolates youngest kid get,

Y= $\frac{H}{15+50} = \frac{H}{65}$

H = 65y ------(i)

Number of chocolates oldest kid get,

$(2 - y) = \frac{H}{100+35} = \frac{H}{135}$

H = 135 (2 – y) -------(ii)

H = 65y = 135 (2 – y)

70y = 270

y = 3.85

from (i)

H = 65 × 3.85 = 250 cm

Hence, option D is correct.