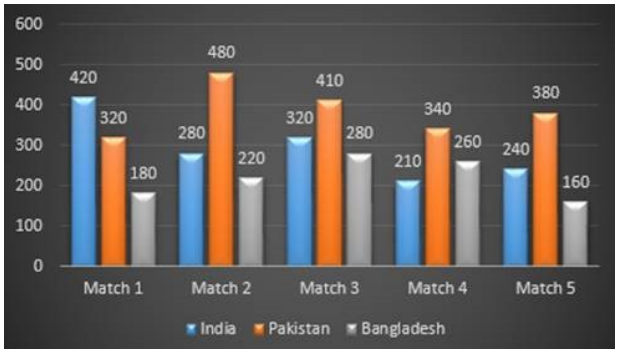
Directions (1-5): *Study the following bar graph carefully to answer the questions that follow:*

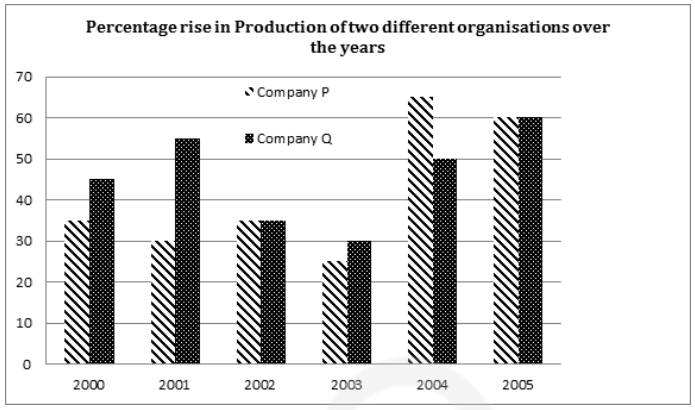
Runs scored by three different teams in five different cricket matches.



1. The total runs scored by India and Pakistan in Match 4 together is approximately what percentage of the total runs scored by Bangladesh in all the five matches together?
   A. 50% B. 68%
   C. 36% D. 54%
   E. 48%
2. In which match is the difference between the runs scored by Pakistan and Bangladesh the second lowest?
   A. Match 1 B. Match 2
   C. Match 3 D. Match 4
   E. Match 5
3. In which match are the total runs scored by India and Bangladesh together the third highest/ lowest?
   A. Match 1 B. Match 2
   C. Match 3 D. Match 4
   E. Match 5
4. What is the ratio of the runs scored by India in Match 5, Pakistan in Match 1 and Bangladesh in Match 2?
   A. 11 : 13 : 17 B. 11 : 17 : 13
   C. 12 : 16 : 11 D. 12 : 13 : 9
   E. None of these
5. What is the approximate average runs scored by all the three teams in Match 3 together?
   A. 337 B. 370
   C. 375 D. 285
   E. None of these

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

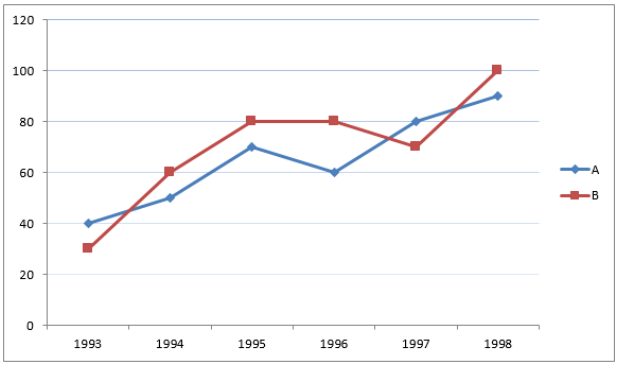
Percentage rise in Production of two different organizations over the years



6. If the production of Company P in 2000 was 1.65 lakh units, what was the number of units produced by same company in 2003?
   A. 117957 B. 127857
   C. 117857 D. 114323
   E. None of these
7. What is the per cent increase in per cent rise of production of Company Q in the year 2005 from the previous year? (rounded off to two digits after decimal)
   A. 22.86 B. 20
   C. 24 D. 26
   E. None of these
8. If Company Q produced 625,125 units in the year 2004, how many units did it produce in the year 2002?
   A. 4,10,500 B. 4,98,000
   C. 4,37587 D. 4,85,500
   E. None of these
9. What is the increase in per cent rise in production of Company P in the year 2004 from the previous year?
   A. 130% B. 60%
   C. 120% D. 160%
   E. None of these
10. Based on the above graph which of the following statements is **definitely true**?
   A. Company P produced the maximum number of units in the year 2000.
   B. For Company Q there was no increase in production in the year 2001 from the previous year.
   C. Company P has produced more units than Company Q in the year 2000.
   D. Average per cent rise in production of Company Q is more than the average per cent rise in production of Company P.
   E. None of these

Directions (11-15): *Study the graph carefully and answer the questions given below it.*

Percent profit earned by the two companies A and B over the year



11. If income for company A in the year 1994 was 35 lakhs what was the expenditure for company B in the same year?
A. 123.5 lakhs B. 128 lakhs
C. 132 lakhs D. Data inadequate
E. None of these

12. The income of company A in 1996 and the income of company B in 1997 are equal. What will be the ratio of expenditure of company A in 1996 to the expenditure of company B in 1997?
A. 26:7 B. 17:16
C. 15:170 D. 116:17
E. None of these

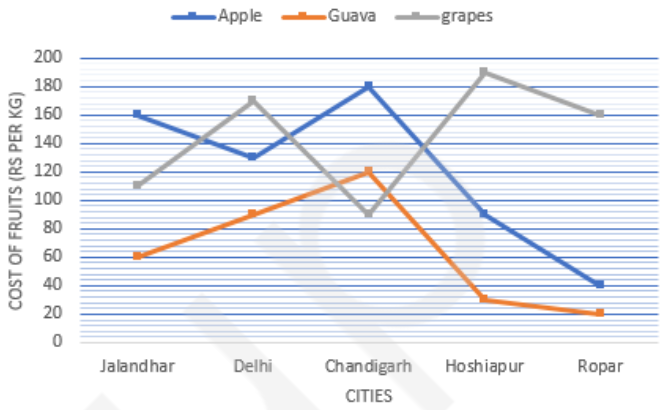
13. During which of the following years the ratio of percent profit earned by company A to that of company B was the maximum?
A. 1993 & 1996 both
B. 1995 AND 1997 both
C. 1993 only
D. 1998 only
E. None of these

14. If the expenditure of company B increased by 20% from 1995 to 1996, the income in 1996 will be how many times the income in 1995?
A. 2.16 B. 1.2
C. 1.8 D. equal
E. None of these

15. If the income of company A in 1996 was Rs. 36 lakhs, what was the expenditure of company A in 1996?
A. 22.5 lakhs B. 128.8 lakhs
C. 120 lakhs D. 121.6 lakhs
E. None of these

Directions (16-20): *Study the following graph carefully to answer the questions that follow.*

Cost of three different fruits (in rupees per kg) in five different cities



16. In which city is the difference between the cost of 1 kg of apple and cost of 1 kg of guava second lowest?
A. Jalandhar B. Delhi
C. Chandigarh D. Hoshiarpur
E. Ropar

17. Cost of 1 kg of guava in Jalandhar is approximately what per cent of the cost of 2 kg of grapes in Chandigarh?
A. 66 B. 24
C. 28 D. 34
E. 58

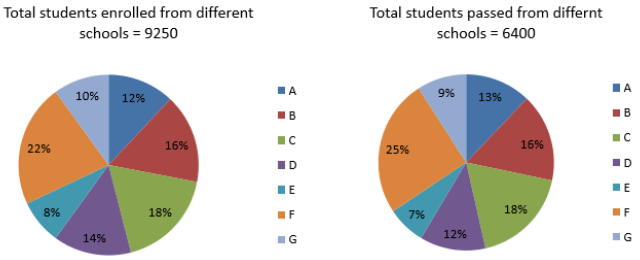
18. What total amount will Ram pay to the shopkeeper for purchasing 3 kg, of apples and 2 kg of guavas in Delhi?
A. ₹ 530 B. ₹ 450
C. ₹ 560 D. ₹ 620
E. None of these

19. Ravinder had to purchase 45 kg of grapes from Hoshiarpur. Shopkeeper gave him discount of 4% per kg. What amount did he pay to the shopkeeper after the discount?
A. ₹ 8208 B. ₹ 8104
C. ₹ 8340 D. ₹ 8550
E. ₹ 8410

20. What is the respective ratio between the cost of 5 kg of apples from Ropar and the cost of 2 kg of grapes from Chandigarh?
A. 3 : 2 B. 2 : 3
C. 4 : 9 D. 10 : 9
E. 5 : 9

Direction (21-25): *Study the following pie-charts to answer the following questions.*

Students from 7 different schools – A, B, C, D, E, F and G were selected to give a competitive exam out of which some students passed the exam as given.



21. What percentage of students passed the exam from school E out of a total number of students enrolled from the same school?
A. 68.5% B. 60.5%
C. 73.5% D. 65.5%
E. 75.5%

22. Which schools has the highest percentage of students passed to students enrolled?
A. E B. A
C. C D. F
E. G

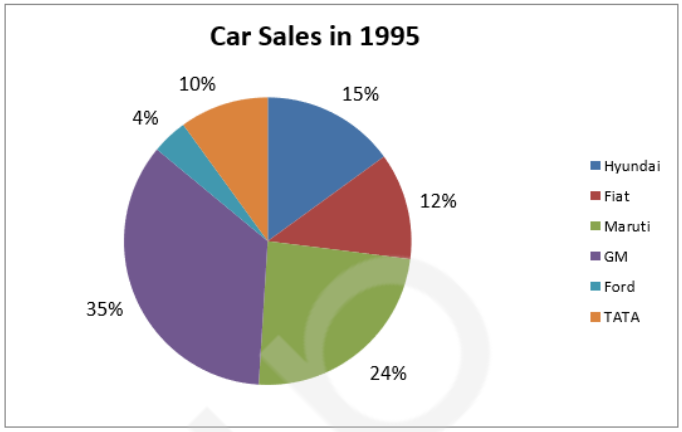
23. The number of students passed from schools A and D together is approximately what percent less than the number of students enrolled from schools C and E together by
A. 45% B. 27%
C. 46% D. 39%
E. 33%

24. What is the approximate percentage of students passed to the students enrolled for schools B and C together?
A. 69% B. 78%
C. 75% D. 62%
E. None of these

25. What is the average of difference between the number of students enrolled from schools D and G together and the number of students passed from schools E and F together?
A. 75 B. 86
C. 93 D. 81
E. None of these

Directions (26-30): *Read the following information carefully and answer the questions that follow:*

The distribution of car sales of 6 companies has been shown in the pie chart below:



Note: The total number of cars sold is equal to 36000

26. If the average cost of a Hyundai car is 2 lakh rupees, then how much money is earned by selling Hyundai cars?
A. 12970 lakh B. 10800 lakh
C. 15520 lakh D. 11000 lakh
E. None of these

27. What is the ratio of the number of Maruti cars sold to that of Fiat cars sold?
A. 2 : 3 B. 4 : 1
C. 2 : 1 D. 3 : 4
E. 1 : 4

28. The total number of Ford cars and TATA cars sold is what percentage of the number of GM cars sold? (Approximate your answer)
A. 51% B. 42%
C. 24% D. 40%
E. Cannot be determined

29. What is the difference between the number of Ford cars sold and the number of Fiat cars sold?
A. 2880 B. 3520
C. 1290 D. 1970
E. None of these

30. Fiat cars are sold at 1.75 lakh rupees, while TATA cars are sold at 1.25 lakh rupees. If the entire supply of Fiat cars is stopped, then how many TATA cars would have to be sold to get the same revenue as that of Fiat cars?
A. 4880 B. 5610
C. 6048 D. 7840
E. None of these

Direction (31-35): *Study the following table carefully and answer the questions that follow.*

College →	A		B		C	
Year	Number of boys	Number of girls	Number of boys	Number of girls	Number of boys	Number of girls
2010	400	250	600	300	500	200
2011	400	300	620	360	540	250
2012	450	320	720	400	640	280
2013	480	360	700	420	640	300

31. Find the ratio of all the boys studying in the three colleges in the year 2011 to all the girls studying in the three colleges in the year 2011.
A. 5 : 3 B. 12 : 5
C. 3 : 1 D. 13 : 8
E. None of these

32. For college C, in which of the given years, the percentage increase in the number of students was maximum compared to previous year?
A. 2011 B. 2012
C. 2013 D. Both A and C
E. Both A and B

33. Find the year in which the percentage of girls as compared to the total number of students is highest for college A.
A. 2013 B. 2012
C. 2011 D. Both 2011 & 2012
E. Both 2011 & 2013

34. 90 new students joined college B in 2013. Find the number of boys who joined if the new ratio of boys to girls becomes 7 : 4.
A. 60 B. 40
C. 70 D. 50
E. None of these

35. There were some students studying in the year 2008 in college A. The % increase in the number of students was fixed at 25% for both the next years. Find the number of students studying in the year 2008 in college A.
A. 424 B. 416
C. 540 D. 556
E. None of these

Directions (36-40): *Study the following table and answer the following*.

Products	Sales (in lakhs) in 2012	Percentage growth in the sales over the previous years		
		2013	2014	2015
A	2	5	10	10
B	3	8	10	20
C	3.6	10	10	12
D	3	9	10	12

36. Find the difference between the sales of products A and B in the year 2015.
A. 154320 B. 173580
C. 143420 D. 185280
E. 165890

37. Find the ratio of sales of product C in 2014 to the sales of product D in 2015.
A. 875 : 654 B. 825 : 763
C. 962 : 744 D. 796 : 733
E. None of these

38. What is the percentage increase in sales of all the four products in 2014 as compared to 2012?
A. 14.22 B. 15.67
C. 20.97 D. 18.35
E. 19.19%

39. Of all the products, which product showed the highest percentage increase in total sales at the end of 2015 in four years?
A. A B. B
C. C D. D
E. None of these

40. If the ratio of defective to non-defective A products is 2 : 3 in 2012 while that of products C is 4 : 5 in same year, then what is the ratio of defective A products to non-defective B products in 2012?
A. 1 : 4 B. 4 : 7
C. 3 : 7 D. 2 : 5
E. 2 : 7

Direction (41-45): *Study the information carefully to answer the following questions.*

A Software firm consists of 1500 employees. The ratio of males to females in 17: 13. All the employees work at five different levels named ANALYSIS, DESIGN, CODING, TESTING and LAUNCHING. 28% of females are at ANALYSIS. 18% of the males work at DESIGN. One-fifth of the males work at LAUNCHING. The ratio of females to males at DESIGN is 2: 3. 25% of the total number of employees is at CODING. Females working at LAUNCHING are 60% of the males working at the same. 18% of the females are at TESTING. The remaining females are at CODING. 16% of the males work at ANALYSIS and the remaining males are working at TESTING.

41. What is the number of males working at CODING?
A. 136 B. 228
C. 253 D. 163
E. 270

42. Number of males working at TESTING forms what percent of the number of females working at the same? (rounded off to two digits after decimal)
A. 145.52% B. 169.12%
C. 123.42% D. 150.62%
E. 139.32%

43. What is the number of females working at LAUNCHING level?
A. 147 B. 182
C. 117 D. 102
E. None of these

44. Number of males working at ANALYSIS level forms approximately what per cent of total number of the employees in the Software firm?
A. 9% B. 13%
C. 18% D. 22%
E. 28%

45. What is the total number of females working at design level and testing level together?
A. 162 B. 236
C. 219 D. 264
E. None of these

Direction (46-50): *Study the table carefully to answer the questions that follow.*

On the occasion of an opening ceremony of a Sports events, in a stadium there are total of 600 players who are participating in four different events viz. Athletics, Table Tennis, Kho-Kho and Lawn Tennis. The ratio between male to female players is 11:4 respectively. 30% of the female players out of total female players are participating in athletics 10% of female players out of total female players are participating in table tennis. The remaining female players are participating in kho-kho and lawn tennis in the ratio of 1:3 respectively. The ratio of male players who are participating in athletics and other events together is 3:5 respectively 4% of those male players who are not participating in athletics are participating in lawn tennis. Remaining male players are participating in table tennis and kho-kho in the ratio of 5:3 respectively.

46. What is the ratio between the female players participating in lawn tennis to table tennis respectively?
A. 9:5 B. 4:7
C. 9:2 D. 7:4
E. None of these

47. What is the difference between male players participating Kho-Kho and female players participating in lawn tennis
A. 27 B. 31
C. 83 D. 76
E. None of these

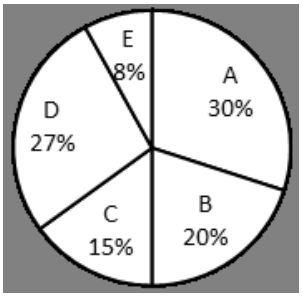
48. What is the ration between male players participating in lawn tennis and female players participating in table tennis respectively?
A. 11:72 B. 11:38
C. 11:16 D. 16:13
E. None of these

49. What is the total number of female players who are participating in athletics and kho-kho together?
A. 68 B. 72
C. 58 D. 67
E. None of these

50. What is the total number of players (both and females together) participating in table tennis and athletics together?
A. 360 B. 358
C. 374 D. 396
E. None of these

Direction (51-55): *The following pie chart represents the number of children born in five different states in a day and table charts represents the ratio of boys to girls.*

Total number of children born in a day in five states = 18000



State	Ratio of boys to girls
A	2:3
B	2:1
C	5:4
D	7:2
E	7:5

51. The difference between number of boys born in states A, C and E together and number of girls born in states B and D together is how much?
A. 2280 B. 2250
C. 2160 D. 2220
E. None of these

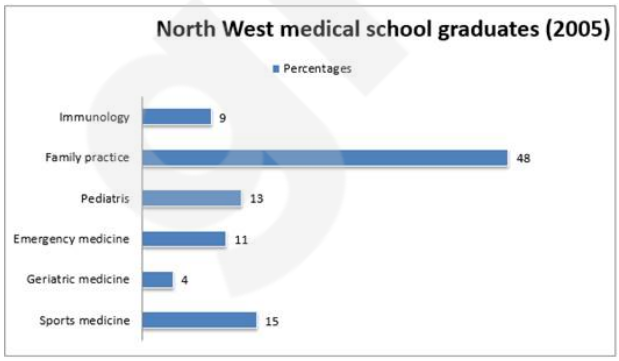
52. Number of boys born in state E is what percent of the number of girls in state B?
A. 70% B. 65%
C. 75% D. 80%
E. None of these.

53. What is the ratio of total number of boys born in state B and C together to the number of girls born in same sates?
A. 13:9 B. 12:7
C. 13:8 D. 7:5
E. None of these

54. 25% of girls born in state C and 20% of boys born in state B together is approximately what percent of the total children born in state E?
A. 62.53% B. 54.17%
C. 65.52% D. 59.56%
E. 52.29%

55. Average of the number of girls born in all states is approximately what percent of the total number of children born in all states?
A. 10.23% B. 11.25%
C. 8.13% D. 7.24%
E. 12.52%

Direction (55-60): *The table above shows the specializations of North West Medical School graduates in 2005. Percentages have been rounded to the nearest whole number. On the basis of the information given in the below table, solve the following questions:*



1200 students graduated that year.

Specialisation	Men : Total
Paediatrics	14 : 26
Emergency Medicine	13 : 22
Geriatric Medicine	3 : 4
Sports Medicine	24 : 45
Immunology	6 : 9
Family Practise	8 : 12

56. What is the approximate percentage of the females who decided to specialize in immunology over the total number of males in geriatric medicine and sports medicine?
A. 15 % B. 24%
C. 31% D. 27 %
E. 17 %

57. What is the approximate ratio of females specializing in sports medicine, emergency medicine and family practice?
A. 30 : 12: 50 B. 12 : 4 : 16
C. 14 : 9 : 32 D. 16: 4: 40
E. 13: 2 :30

58. If one twelfth of the total students plan to work abroad (assuming the students went abroad are proportional from all the department). Then what will be the ratio of the males who decides to practise in India from family practise and paediatrics departments?
A. 24 : 9 B. 32 : 7
C. 26 : 11 D. 27 : 7
E. 31 : 11

59. For the ratio of male to female students specializing in sports medicine practising in India to be 2:1, how many equal students should go abroad from sports medicine?
A. 76 B. 70
C. 68 D. 74
E. 72

60. What is the percentage of women in the total number of graduates from the institute?
A. 36.5% B. 34.5 %
C. 38.5% D. 37.5%
E. 39 %

***

Solutions

1. Ans. A.
Total runs scored by India and Pakistan in Match 4
= (210+340) = 550
Total runs scored by Bangladesh in all the five matches
= (180+220+280+260+160) = 1100
Required percentage = (550*100)/1100 = 50%
2. Ans. C.
Difference between the runs scored by Pakistan and Bangladesh in Match-1
= (320-180) = 140
Difference between the runs scored by Pakistan and Bangladesh in Match-2
= (480-220) = 260
Difference between the runs scored by Pakistan and Bangladesh in Match-3
= (410-280) = 130
Difference between the runs scored by Pakistan and Bangladesh in Match-4
= (340-260) = 80
Difference between the runs scored by Pakistan and Bangladesh in Match-5
= (380-160) = 220
Second lowest is in Match-3
3. Ans. B.
Total runs scored by India and Bangladesh together in Match-1
= (420+180) = 600
Total runs scored by India and Bangladesh together in Match-2
= (280+220) = 500
Total runs scored by India and Bangladesh together in Match-3
= (320+280) = 600
Total runs scored by India and Bangladesh together in Match-4
= (210+260) = 470
Total runs scored by India and Bangladesh together in Match-5
= (240+160) = 400
So third highest/ lowest is Match-2
4. Ans. C.
Total runs scored by India in Match 5 = 240
Total runs scored by Pakistan in Match 1 = 320
Total runs scored by Bangladesh in Match 2 = 220
Required ratio = 240:320:220 = 12:16:11
5. Ans. A.
Total runs scored by all the three teams in Match 3
= (320+410+280) = 1010
Average runs scored by all the three teams in Match 3
= 1010/3 = 337
6. Ans. C.
Required units = $165000 \times \frac{25}{35} = 117857$
7. Ans. B.
Required Percentage increase: (F-I)/I = (60-50)/50 x 100
= 20%
8. Ans. C.
Required units = 625125/50 x 35 = 437587
9. Ans. D.
Required percentage increase = $\frac{(65-25)}{25} \times 100$
$\frac{40}{25} \times 100 = 160\%$
10. Ans. D.
Solve by option
11. Ans. D.
Incomes- Expenditures of company A and B cannot be correlated. So, data inadequate.
12. Ans. B.
Expenditure of company A in 1996=
$E_{96A} = I_{96A}$ [100/ (100+ 60)]
= (5/8) I_{96A}
Expenditure of company B in 1997
= $E_{97B} = I_{97B}$ [100/ (100+ 70)]
= (10/17) I_{97B}
= E_{96A}/ E_{97B} = (5/8)/ (10/17) (Since $I_{96A} = I_{97B}$)
=17:16
13. Ans. C.
Ratio of A: B is greater than 1 for only two years 1993 and 1997.
It is 40/30 = 1.33 in 1993 and 80/70 = 8/7 = 1.14 in 1997.
Hence, 1993 is the right answer.
14. Ans. B.
Let expenditure of B in 1995 be x.
Then E_{96B} =1.2 x (since x+ 20% of x =1.2)
Now, $I_{95B} = E_{95B}$ [(100+ 80)/ 100] = 1.8 x
$I_{96B} = E_{96B}$ [(100+ 80)/ 100] *1.2 x
I_{96B}/ I_{95B} =1.2 times.
15. Ans. A.
$E_{96A} = I_{96A}$ [100/ (100+ 60)]
= 36 lakhs * (100/160)
= 22.5 lakhs
16. Ans. B.
It is clear from the graph that in Jalandhar, Delhi, Chandigarh, Hoshiarpur & Ropar the required differences are 100, 40, 60, 60, 20 respectively.

17. Ans. D.
The cost of two kg of grapes in Chandigarh
= 90 × 2
= ₹180

The cost of one kg of guava in Jalandhar = ₹60
Required percent = $\frac{60}{180} \times 100$
= 33.33 %
≈ 34%
18. Ans. E.
The cost of 3 kg of apples in Delhi = 3 × 130
= 390
The cost of 2 kg of guavas in Delhi = 2 × 90
= 180
Required total amount will be
= (3 × 130 + 2 × 90)
= (390 + 180)
= ₹ 570
19. Ans. A.
Required amount after the discount will be
= $190 \times \frac{96}{100} \times 45$
= ₹ 8208
20. Ans. D.
Respected ratio of 5 kg of apples from Ropar and the cost of 2 kg of grapes from Chandigarh.
= (40*5) : (90*2)
= 10 : 9
21. Ans. B.
[7% of 6400/8% of 9250] * 100
The required answer is = 60.5%
22. Ans. D.
A = [13% of 6400/12% of 9250] * 100 = 75%
B = [16% of 6400/16% of 9250] * 100 = 69%
C = [18% of 6400/18% of 9250] * 100 = 69%
D = [12% of 6400/14% of 9250] * 100 = 69%
E = [7% of 6400/8% of 9250] * 100 = 60.5%
F = [25% of 6400/22% of 9250] * 100 = 79%
G = [9% of 6400/10% of 9250] * 100 = 62.27%
The required answer is = School F.
23. Ans. E.
Students passed from schools A and D = (13+12)% of 6400 = 1600
Students enrolled from schools C and E = (18+8)% of 9250 = 2405
The required % is (2405-1600)/2405 * 100 = 33%
24. Ans. A.
Total passed from B and C = (16+18)% of 6400 = 2176
Total enrolled in B and C = (16+18)% of 9250 = 3145
So required % = 2176/3145 * 100 = 69.19%
The required is = 69% approximately.
25. Ans. B.
Number of students enrolled from schools D and G = 1295 + 925 = 2220
Number of students passed from schools E and F = 448+1600 = 2048
So difference = 2220 – 2048 = 172
So average = 172/2 = 86
26. Ans. B.
Total number of cars sold = 36000
Out of these 15% were Hyundai cars.
∴ Number of Hyundai cars sold = $\frac{15}{100} \times 36000$
∴ Number of Hyundai cars sold = 5400
Money earned from Hyundai cars = 5400 × 2 = 10800 lakh rupees
Hence the correct option is option (B).
27. Ans. C.
Total number of cars sold = 36000
Out of these 24% were Maruti cars.
∴ Number of Maruti cars sold = $\frac{24}{100} \times 36000$
∴ Number of Maruti cars sold = 8640
Out of the total number of cars 12% were Fiat cars.
∴ Number of Fiat cars sold = $\frac{12}{100} \times 36000$
∴ Number of Fiat cars sold = 4320
∴ Required ratio = $\frac{8640}{4320} = \frac{2}{1}$
Hence the correct option is option (C).
28. Ans. D.
Total number of cars sold = 36000
Out of these 4% were Ford cars.
∴ Number of Ford cars sold = $\frac{4}{100} \times 36000$
∴ Number of Ford cars sold = 1440
Out of the total number of cars 10% were Tata cars.
∴ Number of Tata cars sold = $\frac{10}{100} \times 36000$
∴ Number of Tata cars sold = 3600
Total number of Ford and Tata cars sold = 1440 + 3600 = 5040
Out of the total number of cars 35% were GM cars.

∴ Number of GM cars sold = $\frac{35}{100} \times 36000$
∴ Number of GM cars sold = 12600
∴
∴ Required Percentage = 40%
Hence the correct option is option (D).
29. Ans. A.
Total number of cars sold = 36000
Out of these 4% were Ford cars.
∴ Number of Ford cars sold = $\frac{4}{100} \times 36000$
∴ Number of Ford cars sold = 1440
Out of the total number of cars 12% were Fiat cars.
∴ Number of Fiat cars sold = $\frac{12}{100} \times 36000$
∴ Number of Fiat cars sold = 4320
∴ required difference = 4320 - 1440 = 2880
Hence the correct option is option (A).
30. Ans. C.
Total number of cars sold = 36000
Out of the total number of cars 12% were Fiat cars.
∴ Number of Fiat cars sold = $\frac{12}{100} \times 36000$
∴ Number of Fiat cars sold = 4320
Revenue from Fiat cars = 1.75 × 4320 = 7560 lakhs .....(1)
Out of the total number of cars 10% were Tata cars.
∴ Number of Tata cars sold = $\frac{10}{100} \times 36000$
∴ Number of Tata cars sold = 3600
The revenue of Fiat cars needs to be made from TATA cars.
Let the number of TATA cars needed to do so be 'T'.
∴ Fiat revenue = Number of TATA cars × (Selling price of TATA car)
∴ Fiat revenue = T × (1.25)
From (1),
∴ 7560 = T × (1.25)
∴ T = $\frac{7560}{1.25}$
∴ T = 6048
Hence the correct option is option (C).

31. Ans. E.
From the table,
Total number of boys studying in the three colleges in 2011 = 400 + 620 + 540 = 1560
Total number of girls studying in the three colleges in 2011 = 300 + 360 + 250 = 910
Ratio of all the boys studying in the three colleges to all the girls studying in the three colleges in the year 2011 = 1560/910 = 12/7 = 12 : 7
None of the options match, answer is E.
32. Ans. B.
From the table,
Total number of students in college C in 2010 = 500 + 200 = 700
Total number of students in college C in 2011 = 540 + 250 = 790
Total number of students in college C in 2012 = 640 + 280 = 920
Total number of students in college C in 2013 = 640 + 300 = 940
% increase in students in 2011 $= \frac{790-700}{700} \times 100\% \approx 13\%$
% increase in students in 2012 $= \frac{920-790}{790} = 16.5\%$
% increase in students in 2013 $= \frac{940-920}{920} \times 100\% = 2.18\%$
Thus, in year 2012 the % increase in students is the maximum.
33. Ans. E.
From the table,
Total number of students in college A in 2010 = 400 + 250 = 650
Total number of college girls in 2010 = 250
% of girls $= \frac{250}{650} \times 100\% = 38.5\%$
Total number of students in college A in 2011 = 400 + 300 = 700
Total number of college girls in 2011 = 300
% of girls $= \frac{300}{700} \times 100\% = 43\%$
Total number of students in college A in 2012 = 450 + 320 = 770
Total number of college girls in 2012 = 320
% of girls $= \frac{320}{770} \times 100\% = 41.55\%$
Total number of students in college A in 2013 = 480 + 360 = 840
Total number of college girls in 2013 = 360

$$= \frac{360}{840} \times 100\% = \frac{300}{7} = 43\%$$

% of girls

Thus, number of students is maximum in year 2011 and 2013.

34. Ans. C.

Let the number of boys who joined be 'a'

90 new students joined.

Number of girls who joined = 90 – a

From the table,

In 2013, number of boys in college B = 700 and number of girls = 420

$$\Rightarrow \frac{700+a}{420+90-a} = \frac{7}{4}$$

⇒2800 + 4a = 3570 – 7a

⇒ 770 = 11a

⇒ a = 70

35. Ans. B.

Let the number of students studying in college A in 2008 be 'a'

Number of students studying in college A in 2010 = 400 + 250 = 650

There is a constant increase in students in the year 2009 and 2010.

Number of students in 2009 = a + 25% of a = 1.25a

Number of students in 2010 = 1.25a + 25% of 1.25a = 1.5625a

Now, 1.5625a = 650

⇒ a = 416

36. Ans. B.

Sales of A in 2015 = 2 lacs × 105/100 × 110/100 × 110/100 = 254100

Sales of B in 2015 = 3 lacs × 108/100 × 110/100 × 120/100 = 427680

So difference = 427680 – 254100 = 173580

The answer is = 173580

37. Ans. B.

Sales of C In 2014 = 3.6 lacs × 110/100 × 110/100

Sales of D In 2015 = 3 lacs × 109/100 × 110/100 × 112/100

So ratio = 3.6 lacs × 110/100 × 110/100 : 3 lacs × 109/100 × 110/100 × 112/100 = 825 : 763

The answer is = 825 : 763

38. Ans. E.

Sales of A in 2014 = 2 lakhs × 105/100 × 110/100 = 231000

Sales of B in 2014 = 3 lakhs × 108/100 × 110/100 = 356400

Sales of C in 2014 = 3.6 lakhs × 110/100 × 110/100 = 435600

Sales of D in 2014 = 3 lakhs × 109/100 × 110/100 = 359700

So total sales in 2014 = 1382700

Total sales in 2012 = 1160000

So % increase = (1382700 – 1160000)/1160000 * 100 = 19.19%

39. Ans. B.

Sales of A in 2015 = 2 lakhs × 105/100 × 110/100 × 110/100 = 254100

Sales of B in 2015 = 3 lakhs × 108/100 × 110/100 × 120/100 = 427680

Sales of C in 2015 = 3.6 lakhs × 110/100 × 110/100 × 112/100 = 487872

Sales of D in 2015 = 3 lakhs × 109/100 × 110/100 × 112/100 = 402864

So

% increase in sales of product A = (254100-200000)/200000 * 100 = 27.05%

% increase in sales of product B = (427680-300000)/300000 * 100 = 42.56%

% increase in sales of product C = (487872-360000)/360000 * 100 = 35.52%

% increase in sales of product D = (402864-300000)/300000 * 100 = 34.28%

So maximum for B.

The answer is the product B.

40. Ans. D.

Number of defective A products in 2012 = 2/5 * 200000 = 80000

Number of non-defective C products in 2012 = 5/9 * 360000 = 200000

So required ratio = 80000 : 200000 = 2 : 5

41. Ans. B.

From the above table,

Number of males working at CODING = 228

From given information, We can calculate following results -

* Total Number of employees in the Software firm = 1500
* Number of male employees = 17/100 × 1500 = 850
* Number of female employees = 13/30 × 1500 = 650
* Number of female employees working at ANALYSIS = 28% of 650 = 182
* Number of male employees working at DESIGN = 18% of 850 = 153
* Number of male employees working at LAUNCHING = $1/5^{th}$ of 850 = 170
* Number of female employees working at DESIGN = 2/3 × 153 = 102
* Number of employees working at CODING = 25% of 1500 = 375
* Number of female employees working at LAUNCHING = 60% of 170 = 102

* Number of female employees working at TESTING = 18% of 650 = 117
* Number of female employees working at CODING = 650 - (182 + 102 + 102 + 117)
= 650 - 503 = 147
* Number of male employees working at ANALYSIS = 16% of 850 = 136
* Number of male employees working at CODING = 375 - 147 = 228
* Number of male employees working at TESTING = 850 - (153 + 170 + 136 + 228)
= 850 - 687 = 163
Tabulating the above information, we get

	Number of male employees	Number of female employees	Total
ANALYSIS	136	182	318
DESIGN	153	102	255
CODING	228	147	375
TESTING	163	117	280
LAUNCHING	170	102	272
TOTAL	850	650	1500

42. Ans. E.
Number of males working at TESTING = 163
Number of females working at TESTING = 117
∴ Required percentage = 163/117 × 100% = 139.32%
From given information, We can calculate following results -
* Total Number of employees in the Software firm = 1500
* Number of male employees = 17/100 × 1500 = 850
* Number of female employees = 13/30 × 1500 = 650
* Number of female employees working at ANALYSIS = 28% of 650 = 182
* Number of male employees working at DESIGN = 18% of 850 = 153
* Number of male employees working at LAUNCHING = 1/5th of 850 = 170
* Number of female employees working at DESIGN = 2/3 × 153 = 102
* Number of employees working at CODING = 25% of 1500 = 375
* Number of female employees working at LAUNCHING = 60% of 170 = 102
* Number of female employees working at TESTING = 18% of 650 = 117
* Number of female employees working at CODING = 650 - (182 + 102 + 102 + 117)
= 650 - 503 = 147
* Number of male employees working at ANALYSIS = 16% of 850 = 136
* Number of male employees working at CODING = 375 - 147 = 228
* Number of male employees working at TESTING = 850 - (153 + 170 + 136 + 228)
= 850 - 687 = 163
Tabulating the above information, we get

	Number of male employees	Number of female employees	Total
ANALYSIS	136	182	318
DESIGN	153	102	255
CODING	228	147	375
TESTING	163	117	280
LAUNCHING	170	102	272
TOTAL	850	650	1500

43. Ans. D.
Number of females working at LAUNCHING = 102
From given information, We can calculate following results -
* Total Number of employees in the Software firm = 1500
* Number of male employees = 17/100 × 1500 = 850
* Number of female employees = 13/30 × 1500 = 650
* Number of female employees working at ANALYSIS = 28% of 650 = 182
* Number of male employees working at DESIGN = 18% of 850 = 153
* Number of male employees working at LAUNCHING = 1/5th of 850 = 170
* Number of female employees working at DESIGN = 2/3 × 153 = 102
* Number of employees working at CODING = 25% of 1500 = 375
* Number of female employees working at LAUNCHING = 60% of 170 = 102
* Number of female employees working at TESTING = 18% of 650 = 117
* Number of female employees working at CODING = 650 - (182 + 102 + 102 + 117)
= 650 - 503 = 147
* Number of male employees working at ANALYSIS = 16% of 850 = 136
* Number of male employees working at CODING = 375 - 147 = 228
* Number of male employees working at TESTING = 850 - (153 + 170 + 136 + 228)
= 850 - 687 = 163
Tabulating the above information, we get

	Number of male employees	Number of female employees	Total
ANALYSIS	136	182	318
DESIGN	153	102	255
CODING	228	147	375
TESTING	163	117	280
LAUNCHING	170	102	272
TOTAL	850	650	1500

44. Ans. A.
Number of males working at ANALYSIS = 136
∴ Required percentage = 136/1500 × 100% = 9.07% ≅ 9%
From given information, We can calculate following results -
* Total Number of employees in the Software firm = 1500
* Number of male employees = 17/100 × 1500 = 850
* Number of female employees = 13/30 × 1500 = 650
* Number of female employees working at ANALYSIS = 28% of 650 = 182
* Number of male employees working at DESIGN = 18% of 850 = 153
* Number of male employees working at LAUNCHING = 1/5th of 850 = 170
* Number of female employees working at DESIGN = 2/3 × 153 = 102
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* Number of male employees working at ANALYSIS = 16% of 850 = 136
* Number of male employees working at CODING = 375 - 147 = 228
* Number of male employees working at TESTING = 850 - (153 + 170 + 136 + 228)
= 850 - 687 = 163
Tabulating the above information, we get

	Number of male employees	Number of female employees	Total
ANALYSIS	136	182	318
DESIGN	153	102	255
CODING	228	147	375
TESTING	163	117	280
LAUNCHING	170	102	272
TOTAL	850	650	1500

45. Ans. C.
Total number of females working at DESIGN and TESTING together = 102 + 117 = 219
From given information, We can calculate following results -
* Total Number of employees in the Software firm = 1500
* Number of male employees = 17/100 × 1500 = 850
* Number of female employees = 13/30 × 1500 = 650
* Number of female employees working at ANALYSIS = 28% of 650 = 182
* Number of male employees working at DESIGN = 18% of 850 = 153
* Number of male employees working at LAUNCHING = 1/5th of 850 = 170
* Number of female employees working at DESIGN = 2/3 × 153 = 102
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* Number of female employees working at TESTING = 18% of 650 = 117
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* Number of male employees working at TESTING = 850 - (153 + 170 + 136 + 228)
= 850 - 687 = 163
Tabulating the above information, we get

	Number of male employees	Number of female employees	Total
ANALYSIS	136	182	318
DESIGN	153	102	255
CODING	228	147	375
TESTING	163	117	280
LAUNCHING	170	102	272
TOTAL	850	650	1500

46. Ans. C.
Total participants = 600
The ratio between male to female players is 11:4 respectively.
No. of female players participating in event= 4x600/ 15=160
No. of male players = 600- 160 = 440
10% of female players are participating in table tennis → 10x 160/ 100 = 16
30% of the female players out of total female players are participating in athletics = 30x160/ 100 = 48
Remaining female participants = 160 – 16- 48 = 96
96 female participants are in the ration 1:3 in kho-kho and lawn tennis
Hence female players in lawn tennis = 96x 3/ 4 = 72
Hence female players in lawn kho-kho = 96-72 = 24
Hence the ratio between the female players participating in lawn tennis to table tennis =72 : 16 = 18 : 4= **9:2**
47. Ans. A.
Total participants = 600
The ratio between male to female players is 11:4 respectively.
No. of female players participating in event= 4x600/ 15=160
No. of male players = 600- 160 = 440
10% of female players are participating in table tennis → 10x 160/ 100 = 16
30% of the female players out of total female players are participating in athletics = 30x160/ 100 = 48
Remaining female participants = 160 – 16- 48 = 96
96 female participants are in the ration 1:3 in kho-kho and lawn tennis
Hence female players in lawn tennis = 96x 3/ 4 = 72
Hence female players in lawn kho-kho = 96-72 = 24
The ratio of male players who are participating in athletics and other events together is 3:5
Male player participating in athletics = 440x3/8 = 165
Remaining Male players = 440- 165 = 275
4% of those male players who are not participating in athletics are participating in lawn tennis = 4x 275/100 = 11
Male players participating in tennis and kho-kho= 275- 11 = 264
264 male players are participating in table tennis and kho-kho in the ratio of 5:3 respectively
Hence male players in table tennis = 264x 5/ 8 = 33x5 = 165
Hence male players in table kho-kho = 264- 165 = 99
the difference between male players participating Kho-Kho and female players participating in lawn tennis = 99-72 = **27**
48. Ans. C.
Total participants = 600
The ratio between male to female players is 11:4 respectively.
No. of female players participating in event= 4x600/ 15=160
No. of male players = 600- 160 = 440
10% of female players are participating in table tennis → 10x 160/ 100 = 16
30% of the female players out of total female players are participating in athletics = 30x160/ 100 = 48
Remaining female participants = 160 – 16- 48 = 96
96 female participants are in the ration 1:3 in kho-kho and lawn tennis
Hence female players in lawn tennis = 96x 3/ 4 = 72
Hence female players in kho-kho = 96-72 = 24
The ratio of male players who are participating in athletics and other events together is 3:5
Male player participating in athletics = 440x3/8 = 165
Remaining Male players = 440- 165 = 275
4% of those male players who are not participating in athletics are participating in lawn tennis = 4x 275/100 = 11
Male players participating in tennis and kho-kho= 275- 11 = 264
264 male players are participating in table tennis and kho-kho in the ratio of 5:3 respectively
Hence male players in table tennis = 264x 5/ 8 = 33x5 = 165

Hence male players in table kho-kho = 264- 165 = 99
male players participating in lawn tennis = 11
female players participating in table tennis = 16
the ration between male players participating in lawn tennis and female players participating in table tennis = **11: 16**
49. Ans. B.
Total participants = 600
The ratio between male to female players is 11:4 respectively.
No. of female players participating in event= 4x600/ 15=160
No. of male players = 600- 160 = 440
10% of female players are participating in table tennis → 10x 160/ 100 = 16
30% of the female players out of total female players are participating in athletics = 30x160/ 100 = 48
Remaining female participants = 160 – 16- 48 = 96
96 female participants are in the ration 1:3 in kho-kho and lawn tennis
Hence female players in lawn tennis = 96x 3/ 4 = 72
Hence female players in kho-kho = 96-72 = 24
total number of female players who are participating in athletics and kho-kho together = 48+ 24 =72
50. Ans. E.
Total participants = 600
The ratio between male to female players is 11:4 respectively.
No. of female players participating in event= 4x600/ 15=160
No. of male players = 600- 160 = 440
10% of female players are participating in table tennis → 10x 160/ 100 = 16
30% of the female players out of total female players are participating in athletics = 30x160/ 100 = 48
Remaining female participants = 160 – 16- 48 = 96
96 female participants are in the ration 1:3 in kho-kho and lawn tennis
Hence female players in lawn tennis = 96x 3/ 4 = 72
Hence female players in kho-kho = 96-72 = 24
The ratio of male players who are participating in athletics and other events together is 3:5
Male player participating in athletics = 440x3/8 = 165
Remaining Male players = 440- 165 = 275
4% of those male players who are not participating in athletics are participating in lawn tennis = 4x 275/100 = 11
Male players participating in tennis and kho-kho= 275- 11 = 264
264 male players are participating in table tennis and kho-kho in the ratio of 5:3 respectively
Hence male players in table tennis = 264x 5/ 8 = 33x5 = 165
Hence male players in table kho-kho = 264- 165 = 99
total number of players (both and females together) participating in table tennis and athletics together =16+ 48+ 165+ 165 = **394, hence option (5)**

51. Ans. D.

State	Total	Boys	Girls
A	5400	2160	3240
B	3600	2400	1200
C	2700	1500	1200
D	4860	3780	1080
E	1440	840	600

Difference = (2160 +1500 + 840) – (1200 +1080) = 4500 – 2280 =2220
52. Ans. A.
Required percentage
$$=\frac{840}{1200}\times 100=70\%$$
56. Ans. C.
average number of girls born
$$=\frac{3240+1200+1200+1080+600}{5}=1464$$
Required percentage
$$=\frac{1464}{18000}\times 100=8.13\%$$
53. Ans. C.
Required ratio = (2400 +1500):(1200 + 1200) = 39: 24 =13 : 8
54. Ans. B.
$$=\frac{300+480}{1440}\times 100$$
$$=\frac{780}{1440}\times 100=54.17\%$$

55. Ans. C.
average number of girls born $= \frac{3240+1200+1200+1080+600}{5} = 1464$
Required percentage
$= \frac{1464}{18000} \times 100 = 8.13\%$
56. Ans. D.
$\frac{36}{132} \times 100 = 27\%$
57. Ans. C.
Number of females from sports medicine = 7% of total graduates, number of females from emergency medicine = 4.5 % of the total and number of females from family practise is 16% of the total so the ratios are 7 : 4.5 : 16 = 70 : 45 : 160= 14 : 9 : 32
58. Ans. B.
Total male graduates from family practise = 32 % of the total, which is equal to 384, out of it 1/12 gone overseas, so remaining men are = 352, Similarly in paediatrics male are 7% of the total = 84, and number of men in india are = 77, ratio = 352 : 77 = 32 : 7
59. Ans. E.
The ratio of male : female practising sports medicine is 8 : 7 , so the men and women are 96 : 84, for them to be in the ratio 2 : 1 , 72 students should go from each .
60. Ans. D.
The percentage of females from Paediatrics, Emergency Medicine, Geriatric Medicine, Sports Medicine, Immunology and Family Practise are 6% , 4.5%,1%,7%,3% and 16% respectively so total is = 37.5%

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