SSC CPO SI EXAM PAPER-2018 11 Sets

1. SSC CPO SI EXAM PAPER-2018
Exam Time : 10:00 AM - 12:00 PM
Exam Date :12/03/2019

1. The efficiencies of A, B and C are in the ratio 4 : 5 : 6. Working together. they can complete a work in 12 days. In how many days will A alone be able to complete that work?
   (1) 30 (2) 45
   (3) 40 (4) 36

2. A sphere of radius 6 cm is melted and recast into spheres of radius 2 cm each. How many such spheres can be made?
   (1) 25 (2) 36
   (3) 24 (4) 27

3. If the six digit number $4x4y96$ is divisible by 88, then what will be the value of $(x + 2y)$?
   (1) 11 (2) 12
   (3) 13 (4) 10

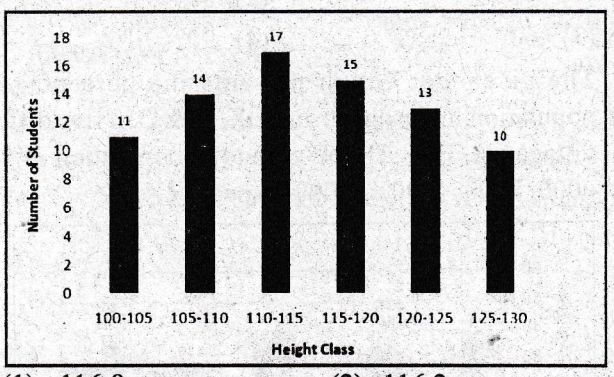
4. If A's income is 40 % more than the income of B. then what percentage of B's income is less than income of A?
   (1) $27\frac{4}{7}\%$ (2) $28\frac{5}{7}\%$
   (3) $27\frac{5}{7}\%$ (4) $28\frac{4}{7}\%$

5. If a train runs at 60 km/h, it reaches its destination 15 minutes late. But, if it runs at 80 km/h. it is late by 7 minutes only. The right time for the train to cover its journey is:
   (1) 17 minutes (2) 18 minutes
   (3) 20 minutes (4) 21 minutes

6. From the top of a 10 m high building, the angle of elevation of the top of a tower is 60° and the angle of depression of the foot of the tower ϕ is $\phi = \frac{2}{3}$, such that tan. What is the height of the tower to nearest metres?
   (1) 35 m (2) 36 m
   (3) 34 m (4) 33 m

7. A sum off ₹20,000 is invested for 15 months at the interest of 10% per annum compounded half yearly. What is the percentage gain, correct to one decimal place, at the end of 15 months?
   (1) 13.6% (2) 13.4%
   (3) 13.0% (4) 12.5%

8. In the given histogram, what is the mean height of all students correct to one decimal place?



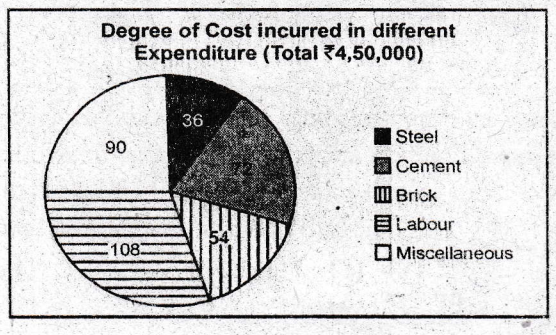
   (1) 116.8 cm (2) 116.2 cm
   (3) 115.6 cm (4) 114.7 cm

9. PA and PB are two tangents to a circle with centre O. from a point P outside the circle. A and B are points on the circle. If $\angle APB = 40°$, then $\angle OAB$ is equal to:
   (1) 20° (2) 40°
   (3) 25° (4) 50°

10. Two pipes A and B can fill a tank in 6 hours and 9 hours respectively. They are opened alternately for 1 hour each, starting with pipe A first. In how many hours will the tank be filled?
   (1) 6 (2) 5
   (3) 4 (4) 7

Instructions

Read the given pie-chart and answer the questions below.



what is the total expenditure (in percent) on labour charges?

(1) 25% (2) 30%
(3) 18% (4) 20%.

the expenditure on steel is what percent of the expenditure on cement?

(1) 55% (2) 40%
(3) 50% (4) 45%

If $\Delta ABC \sim \Delta QPR$, $\frac{or(\Delta ABC)}{or(\Delta ABC)} = \frac{9}{4}$, AC = 12 cm, AB = 18 cm and BC = 15 cm then PR is equal to :

(1) 12 cm (2) 8 cm
(3) $\frac{20}{3}$ cm (4) 10 cm

In an examination, 54 % of the candidates passed in science and 42 % failed in mathematics. If 32% failed in both 14 subjects, what percentage passed in both subjects?

(1) 32% (2) 56%
(3) 44% (4) 48%

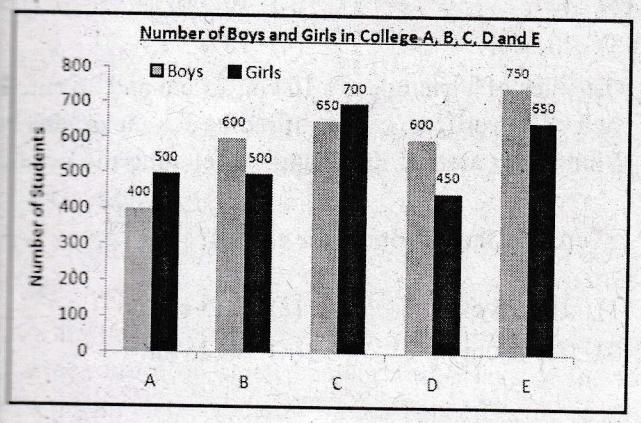
A sum of ₹15,000 is invested partly at 12% per annum and the remaining at 10% per annum simple interest. If the total interest at the end of 2 years is ₹3,344 how much money was invested at 10% per annum

(1) ₹6,600 (2) ₹6,400
(3) ₹6,200 (4) ₹6,500

The side of a rhombus is 5 cm and one of its diaconal is 8 cm. What is the area of the rhombus?

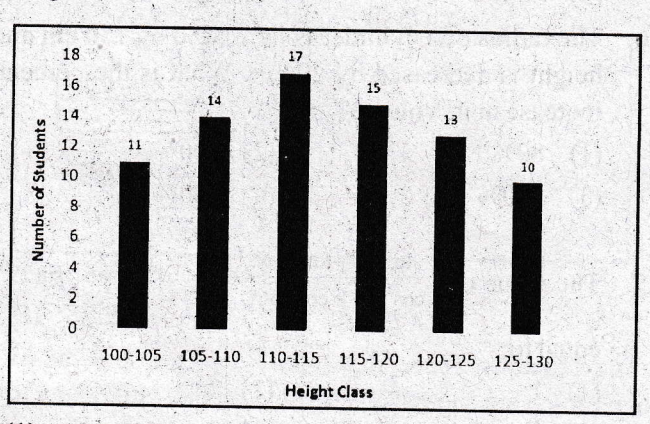
(1) 40 cm^2 (2) 20 cm^2
(3) 30 cm^2 (4) 24 cm^2

In the given bar graph, in which college the difference between the percentage of boys and girls is maximum, by taking total number of students as base for that college?



(1) A (2) E
(3) B (4) D

18. In the given histogram. in which class does the median height of the students lie?



(1) 105-110 (2) 110-115
(3) 115-120 (4) 120-125

19. Two numbers are in the ratio 4 : 5. If their HCF is 16. then the sum of these two numbers is:

(1) 150 (2) 160
(3) 124 (4) 144

20. $4\frac{4}{5} \div \frac{3}{7}$ of $7 + \frac{4}{5} \times \frac{3}{10} - \frac{1}{5}$ is equal to:

(1) $\frac{34}{25}$ (2) $\frac{41}{25}$
(3) $\frac{8}{5}$ (4) $\frac{7}{5}$

21. What is the sum of digits of the least number. which when divided by 15, 18 and 24 leaves the remainder 8 in each case and is also divisible by 13?

(1) 18 (2) 16
(3) 15 (4) 17

22. A shopkeeper marks his aoods at a price such that after giving a discount of 25 % he gains 20%. If the cost price of the article is ₹460, what is its marked price?

(1) ₹736 (2) ₹725
(3) ₹748 (4) ₹752

23. If $(x-5)^3 + (x-6)^3 + (x-7)^3 = 3(x-5)(x-6)(x-7)$, then what is the value of x?

(1) 7 (2) 5
(3) 18 (4) 6

24. A shopkeeper sold two articles for ₹9471 each. On one, he gained 23% and on the other, he lost 23%. What is the overall percentage gain or loss?

(1) 5.29% gain (2) 5.29% loss
(3) 6.29% loss (4) 6.29% gain

25. In a class of 50 students. 40% are girls. The average weight of the boys is 62 kg and that of the girls is 58 kg. What is the average weight (in kg) of the whole class?

(1) 60.4 (2) 60.2
(3) 60.8 (4) 60.6

26. The radius of a cylinder is increased by 150 cm and its height is decreased by 20 cm. What is the percentage increase in its volume?

(1) 80% (2) 400%
(3) 500% (4) 600%

27. The value of $\left[\frac{\sin^2 24^\circ+\sin^2 66^\circ}{\cos^2 24^\circ+\cos^2 66^\circ}+\sin^2 61^\circ+\cos 61^\circ \sin 29^\circ\right]$ is equal to:

(1) 1 (2) 3
(3) 0 (4) 2

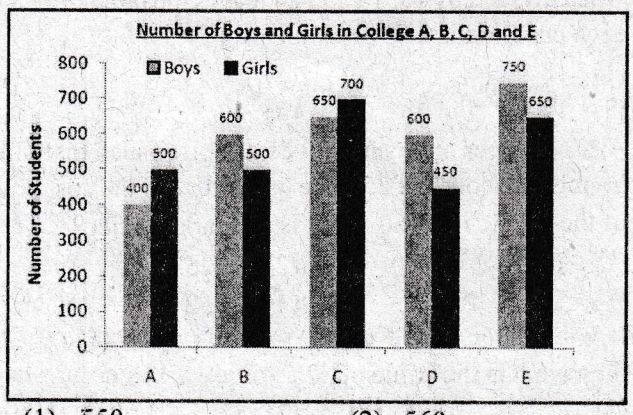
28. If $\tan x = \cot(45^\circ + 2x)$, then what is the value of x?

(1) 45° (2) 20°
(3) 15° (4) $\frac{45}{2}^\circ$

29. A, B and C started a business by investing ₹55,000, ₹65,000 and ₹75,000 respectively. A is a working partner and gets 20% of the profit and the remaining is distributed in the proportion of their investments. If total profit is ₹87,750, what is the share of A?

(1) ₹23,000 (2) ₹37,350
(3) ₹27,000 (4) ₹37,500

30. In the given bar graph, what is the average number of girls in all colleges?



(1) 550 (2) 560
(3) 540 (4) 600

31. In ΔABC, $\angle A = 50^\circ$. In sides AB and AC are produced to the point D and E. If the bisectors of $\angle CBD$ and $\angle BCE$ meet at the point O, then $\angle BOC$ is equal to:

(1) 55° (2) 75°
(3) 65° (4) 40°

32. The successive discounts of 20%. 10 % and 15 % is equivalent to a single discount of:

(1) 42.2 % (2) 43.5 %
(3) 38.8 % (4) 44.5%

33. What is the sum of the mean proportional between 10.8 and 4.8 and the third proportional of 2 and 4?

(1) 10.2 (2) 11.2
(3) 8.2 (4) 15.2

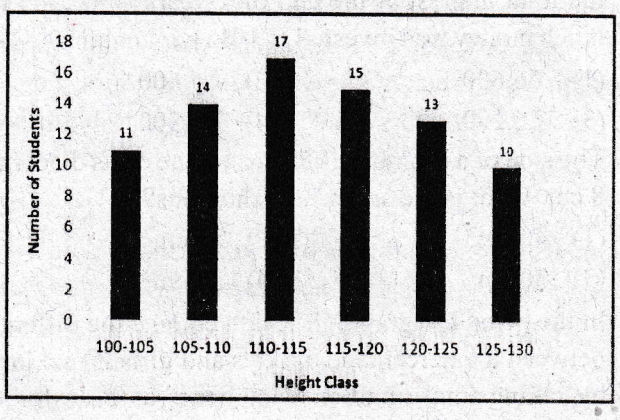
34. The square root of which of the following is a rational number?

(1) 6250.49
(2) 1250.49
(3) 5768.28
(4) 1354.24

35. If $x + \frac{1}{x} = 5$, then $x^3 + \frac{1}{x^3}$ is equal to:

(1) 125 (2) 130
(3) 145 (4) 110

36. In the given histogram, what percentage of students have height in the interval of 105 – 110?

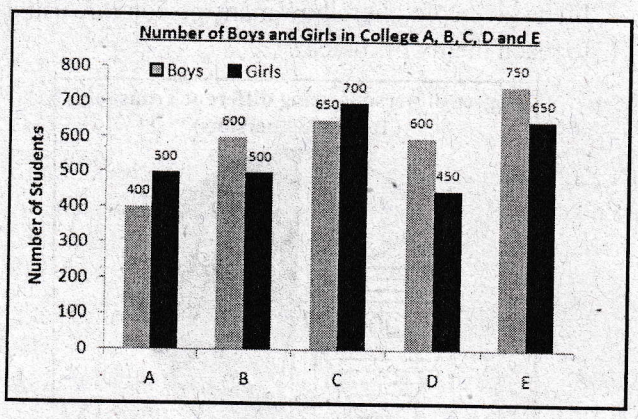


(1) 17% (2) 16.5%
(3) 17.5% (4) 18%

37. The sides of a triangle are 10 cm, 24 cm and 26 cm. At each of its vertices, circles of radius 3.5 cm are drawn. What is the area of the triangle excluding the portion covered by the sectors of the circles? $\left(\pi = \frac{22}{7}\right)$

(1) 100.75 cm^2 (2) 81.5 cm^2
(3) 75.75 cm^2 (4) 78.25 cm^2

38. In the given bar graph, what is the ratio of the total boys and girls in all 5 colleges?



(1) 13 : 12 (2) 14 : 15
(3) 15 : 14 (4) 12 : 13

39. If $a^3 - b^3 = 208$ and $a - b$, then $(a + b)^2 - ab$ is equal to:
(1) 42 (2) 52
(3) 32 (4) 38

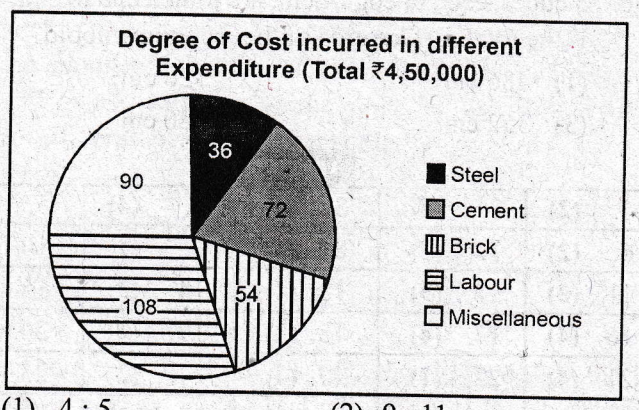
40. $\dfrac{675\times675\times675+325\times325\times325}{67.5\times67.5+32.5\times32.5-67.5\times32.5}$ is equal to:
(1) 10,000 (2) 100
(3) 1,00,000 (4) 1,000

41. A ladder leaning against a wall makes an angle α with the horizontal ground such that $\tan\alpha = \frac{3}{4}$. If the foot of the ladder is 5 m away from the wall, what is the length of the ladder?
(1) 4.5m (2) 6.25 m
(3) 5.25 m (4) 3.75 m

42. $9\frac{3}{4} \div \left[2\frac{1}{6} + \left\{4\frac{1}{3} - \left(2\frac{1}{2} + \frac{3}{4}\right)\right\}\right]$ is equal to :
(1) 4 (2) 3
(3) $\frac{15}{4}$ (4) $\frac{17}{4}$

43. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle ADC = 140°. Then angle BAC is equal to:
(1) 60° (2) 38°
(3) 50° (4) 40°

44. In the given pie-chart, what is the ratio of the total expenditure on steel, cement and bricks to the total expenditure on labour and miscellaneous expenses?



(1) 4 : 5 (2) 9 : 11
(3) 3 : 7 (4) 3 : 5

45. 24 persons working 8 hours a day can complete 2 units of a work in 10 days. How many persons are required to complete 4 units of that work, if they work 6 hours a day for 16 days?
(1) 40 (2) 36
(3) 48 (4) 32

46. The average of 16 numbers is 43. The average of the first 7 numbers is 45 and the average of the next 6 numbers is 11 less than the 15th number and is 5 more than the 16th number, then the average of the and 16th number is:
(1) 48.5 (2) 48
(3) 47.5 (4) 49

47. Pipes A and B can fill a tank in 6 hours and 9 hours respectively and pipe C can empty the full tank in 12 hours. If all three pipes are opened together when a tank is empty, in how many hours will 35% of the tank be filled?
(1) 1.9 (2) 1.6
(3) 1.1 (4) 1.8

48. A boat can go 30 km downstream and 24 km upstream in 2 hours 27 minutes. Also, it can go 20 on downstream and 8 km upstream in 74 minutes. What is the speed of the boat in still water in km/h?
(1) 22 (2) 18
(3) 20 (4) 24

49. The price of sugar has decreased by 15%. By what percentage can a person increase the consumption so that there is no change in the expenditure?
(1) $\frac{300}{23}\%$ (2) $\frac{50}{3}\%$
(3) $\frac{20}{3}\%$ (4) $\frac{300}{17}\%$

50. 5 cubes, each of edge 4 cm, are joined end to end. What is the total surface area of the resulting cuboid?

(1) 486 cm^2 (2) 526 cm^2

(3) 352 cm^2 (4) 720 cm^2

Answers

1. (2)	2. (4)	3. (3)	4. (4)	5. (1)
6. (2)	7. (3)	8. (4)	9. (1)	10. (4)
11. (2)	12. (3)	13. (4)	14. (3)	15. (2)
16. (4)	17. (4)	18. (2)	19. (4)	20. (2)
21. (4)	22. (1)	23. (4)	24. (2)	25. (1)
26. (2)	27. (4)	28. (3)	29. (2)	30. (2)
31. (3)	32. (3)	33. (4)	34. (4)	35. (4)
36. (3)	37. (1)	38. (3)	39. (2)	40. (3)
41. (2)	42. (2)	43. (3)	44. (2)	45. (1)
46. (2)	47. (4)	48. (1)	49. (4)	50. (3)

2. SSC CPO SI EXAM PAPER-2018

Exam Time :3:00 PM - 5:00 PM

Exam Date :12/03/2019

1. Pipes A and B can fill a tank in 6 hours and 8 hours respectively and pipe C can empty the full tank in 12 hours. All three pipes are opened together. but pipe A is closed after 3 hours. In how many hours will the remaining part of the tank be filled?

(1) 10 (2) 9

(3) 11 (4) 12

2. A sum of ₹12,800 is invested partly at 15% per annum and the remaining at 12% per annum simple interest. If the total interest at the end of 3 years is ₹5.085. then how much money was invested at 15% per annum?

(1) ₹5,300 (2) ₹7,500

(3) ₹5,800 (4) ₹5,200

3. A ladder leaning against a wall makes an angle θ with the horizontal ground such that $\sin\theta = \frac{12}{13}$. If the foot of the ladder is 7.5 m from the wall, then what is the height of the point where the top of the ladder touches the wall?

(1) 8 m (2) 15 m

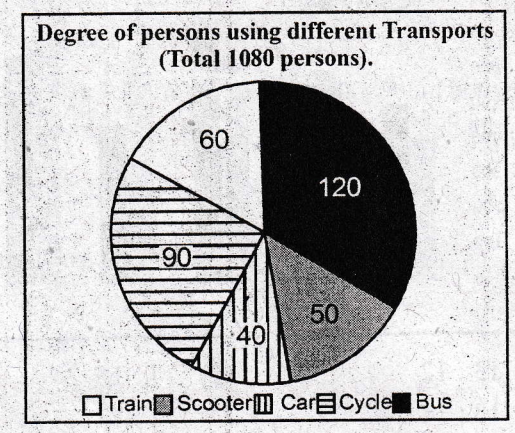
(3) 18 m (4) 12 m

4. Let $\Delta ABC \sim \Delta PQR$ and $\frac{or(\Delta ABC)}{or(\Delta PQR)} = \frac{9}{16}$ If AB = 12 cm, BC = 6 cm and AC = 9 cm, then PR is equal to:

(1) 12 cm (2) 16 cm

(3) 8 cm (4) 9 cm

5. In the given pie-chart, how many persons are using train to reach their workplace?



(1) 360 (2) 380

(3) 400 (4) 320

6. The square root of which of the following is a rational number?

(1) 1489.96 (2) 2460.14

(3) 5823.82 (4) 22504.9

7. Two pipes A and B can fill an empty tank in 8 hours and 12 hours respectively. They are opened alternately for 1 hour each, starting with pipe A first. In how many hours will the empty tank be filled?

(1) 9 (2) $9\frac{1}{4}$

(3) $9\frac{1}{2}$ (4) $9\frac{1}{3}$

8. Two numbers are in the ratio 4 : 7. If their HCF is 26. then the sum of these two numbers will be:

(1) 286 (2) 338

(3) 312 (4) 364

9. If $a^3 + b^3 = 5824$ and $a + b = 8$, then $(a-b)^2 + ab$ is equal to:

(1) 208 (2) 180

(3) 236 (4) 152

10. A sum of ₹18,000 is invested for 16 months at 8% per annum compounded half-yearly. What is the percentage gain at the end of 16 months. to the nearest whole number?

(1) 10% (2) 11%

(3) 12% (4) 9%

11. The price of sugar is decreased by 10%. By what percent can a person increase the consumption so that there is no change in the expenditure?

(1) $\frac{100}{9}\%$ (2) $\frac{100}{11}\%$

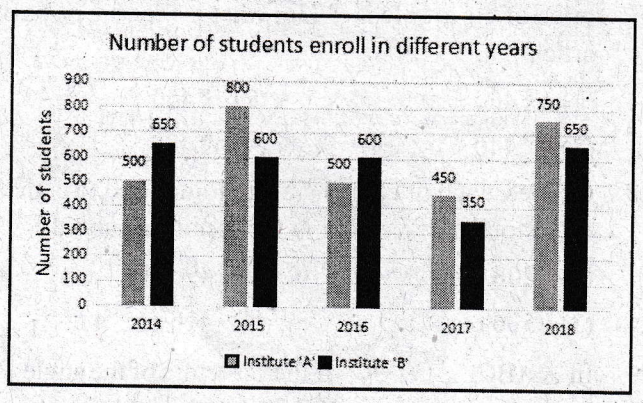
(3) $\frac{109}{11}\%$ (4) 10%

12. The sides of a triangle are 8 cm, 15 cm, and 17 cm respectively. At each of its vertices, circles of radius 3.5 cm are drawn. What is the area of the triangle excluding the portion covered by the sectors of the circles $\left(\pi = \frac{22}{7}\right)$?

(1) 21.5 cm^2 (2) 47 cm^2

(3) 23.5 cm^2 (4) 40.75 cm^2

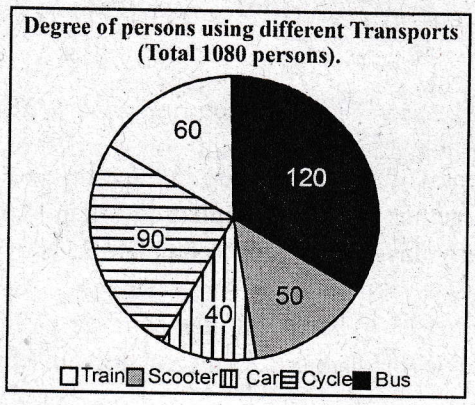
13. In the given bar graph, the number of students enrolled in institute B in the year 2016 is what percentage of students enrolled in institute A in 2016?



(1) $\frac{250}{3}\%$ (2) 85%

(3) 120% (4) $\frac{325}{6}\%$

14. In the given pie chart, what is the ratio of the number of people who use train or car to reach their office to the number of people who use other means of transport to reach their office.



(1) 3 : 5 (2) 4 : 5

(3) 5 : 6 (4) 5 : 3

15. A shopkeeper sold two articles for ₹9831 each. On one he gained 13% and on the other, he lost 13%. What is the overall percentage gain or loss?

(1) 1.69% gain

(2) 6.5% gain

(3) 6.5% loss

(4) 1.69% loss

16. The radius of a cylinder is increased by 120% and its height is decreased by 40%. What is the percentage increase in its volume?

(1) 180.6% (2) 190.4%

(3) 175.4% (4) 212.8%

17. The income of A is 24% more than the income of B. By what percent is the income of B less than the income of A?

(1) $\frac{600}{31}\%$ (2) $\frac{150}{7}\%$

(3) $\frac{600}{29}\%$ (4) $\frac{500}{31}\%$

18. The successive discount of 25%, 20% and 10% is equivelant to a single discount of:

(1) 54% (2) 46%

(3) 48% (4) 44%

19. From the top of a 12 m high building, the angle of elevation of the top of a tower is 60° and the angle of depression of the foot of the tower is θ, such that $\tan\theta = \frac{3}{4}$. What is the height of the tower $(\sqrt{3} = 1.73)$?

(1) 37.95 m (2) 39.68 m

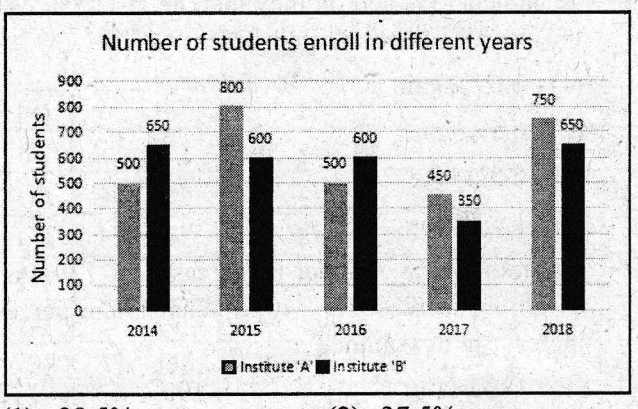
(3) 41.41 m (4) 36.22 m

20. $5\frac{5}{6} + \left[2\frac{2}{3} - \left[3\frac{3}{4}\left(3\frac{4}{5} \div 9\frac{1}{2}\right)\right]\right]$

(1) 7 (2) $\frac{22}{3}$

(3) $\frac{44}{7}$ (4) $\frac{43}{6}$

21. In the given bar graph, the percentage decrease in the number of students in Institute A in 2016 is what percent of students in 2015.

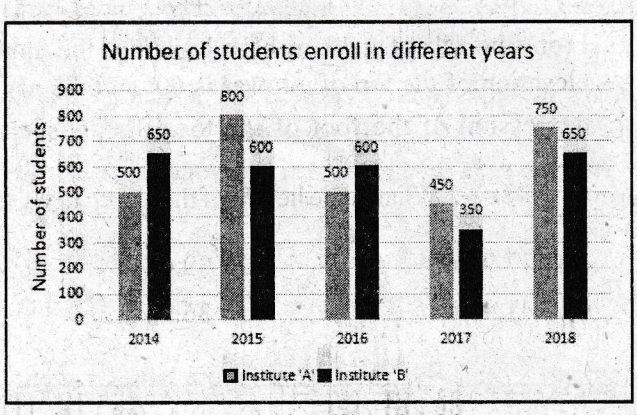


(1) 39.5% (2) 37.5%
(3) 40.5% (4) 35.5%

22. The average of 18 numbers is 52. The average of the first 8 numbers is 62 and the average of the next 7 numbers is 45. If the 16th number is 6 less than the 17th number and the 17th number is one more than the 18th number. then what is the average of the 16th and 18th numbers?

(1) 39.5 (2) 40.5
(3) 40 (4) 39

23. In the given bar graph, what is the ratio of the total number of students from 2016 to 2018 in institute A to the total number of students from 2016 to 2018 in institute B.



(1) 21 : 23 (2) 19 : 20
(3) 20 : 19 (4) 23 : 21

24. One side of a rhombus is 13 cm and one of its diagonals is 24 cm. What is the area of the rhombus?

(1) 120 cm^2 (2) 130 cm^2
(3) 156 cm^2 (4) 312 cm^2

25. The value of $3\frac{1}{5}-\left[2\frac{1}{2}-\left(\frac{5}{6}-\left(\frac{2}{5}+\frac{3}{10}-\frac{4}{15}\right)\right)\right]$ is:

(1) $\frac{6}{5}$ (2) $\frac{11}{10}$
(3) $\frac{9}{10}$ (4) $\frac{13}{5}$

26. What is the sum of the digits of the least number, which when divided by 12, 16 and 54. leaves the same remainder 7 in each case, and is also completely divisible by 13?

(1) 36 (2) 9
(3) 16 (4) 27

27. A shopkeeper marks his good at a price such that afier giving a discount of 25%, the gains 20%. If the marked price of the article is ₹736, what is the cost price of the article?

(1) ₹460 (2) ₹450
(3) ₹440 (4) ₹455

28. 6 cubes. each of edge 4 cm. are joined end to end. What is the total surface area of the resulting cuboid?

(1) 208 cm^2 (2) 496 cm^2
(3) 576 cm^2 (4) 416 cm^2

29. In ΔABC, $\angle C = 30°$. If the bisectors of the angle B and angle C meet at a point O in the interior of the triangle, then $\angle BOC$ is equal to:

(1) 90° (2) 120°
(3) 75° (4) 105°

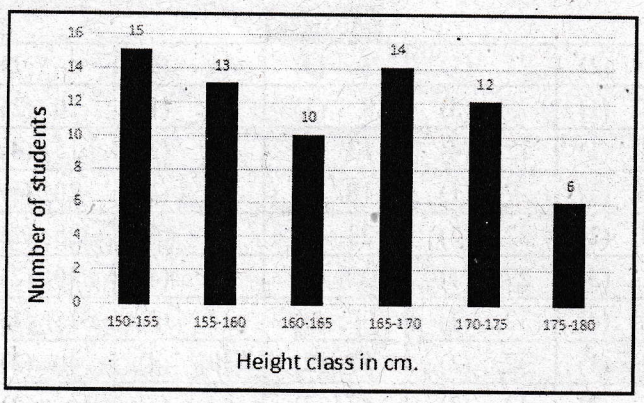
30. The value of $\frac{\sin 30° - \cos 60° + \cot^2 45°}{\cos 30° - \tan 45° + \sin 90°}$ is equal to :

(1) $\frac{\sqrt{3}}{4}$ (2) $\frac{2\sqrt{3}}{3}$
(3) $\frac{\sqrt{3}}{2}$ (4) $\frac{3}{2}$

31. The efficiency of A, B and C are in the ratio 5 : 6 : 9. Working together, they can complete a work in 18 days. In how many days can B alone complete 25% of that work?

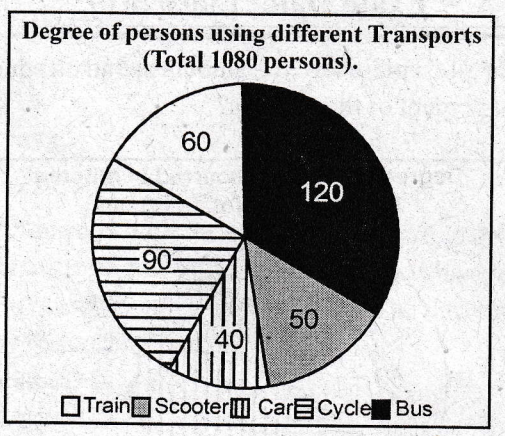
(1) 18 (2) 10
(3) 16 (4) 15

32. In the given histogram, what is the percentage of students whose height is in the class interval 165 – 170?



(1) 18% (2) 25%
(3) 20% (4) 15%

33. In the given pie-chart, the number of persons using a car is what percentage of persons using a scooter?



(1) 75% (2) 50%
(3) 80% (4) 60%

34. ABCD is a cyclic quadrilateral such that AB is the diameter of the circle circumscribing it and $\angle ADC = 145°$. What is the measure of $\angle BAC$?

(1) 50° (2) 35°
(3) 55° (4) 40°

35. 36 persons working 8 hours a day can do 3 units of work in 12 days. How many persons are required to do 5 units of that work in 16 days, if they work for 6 hours a day?

(1) 60 (2) 55
(3) 45 (4) 50

36. If a train runs with the speed of 48 km/h, it reaches its destination late by 12 minutes. However, if its speed in 64 km/h it is late by 3 minutes only. The right time for the train to cover its journey (in minutes) is:

(1) 24 (2) 22
(3) 18 (4) 20

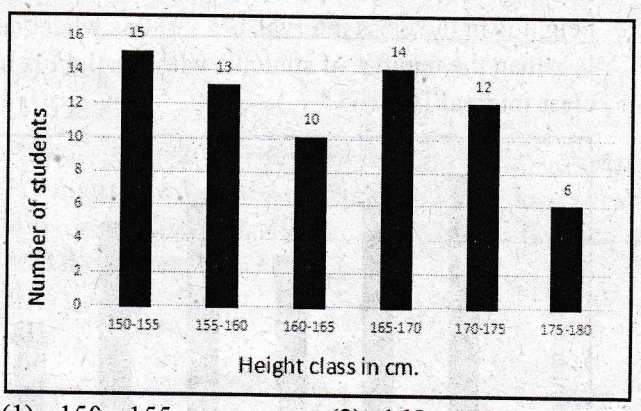
37. If $\tan 3x = \cot(30° + 2x)$, then what is the value of x?

(1) 18° (2) 12°
(3) 10° (4) 15°

38. In a class of 45 students. 40% are girls and the remaining are boys. The average marks of the girls is 64 and that of the boys is 60. What is the average marks of the whole class?

(1) 62.4 (2) 61.6
(3) 62.9 (4) 61.8

39. In the given histogram, which class is the median class?



(1) 150 - 155 (2) 165 - 175
(3) 155 - 160 (4) 160 - 165

40. A boat can go 30 km downstream and 24 km upstream in 2 hours 27 minutes. Also, it can go 10 km downstream and 4 km upstream in 37 minutes. What is the speed of the boat upstream (in)?

(1) 18 (2) 20
(3) 22 (4) 24

41. If $(2x + 3)^3 + (x - 8)^3 + (x + 13)^3 = (2x + 3)(3x - 24)(x + 13)$, then what is the value of x?

(1) –2.5 (2) –2
(3) –1 (4) –1.5

42. If the seven digit number $74x29y6$ is divisible by 72, then what will be the value of $(2x + 3y)$?

(1) 16 (2) 20
(3) 19 (4) 21

43. If $x - \frac{1}{x} = 6$, then $x^3 - \frac{1}{x^3}$ is equal to:

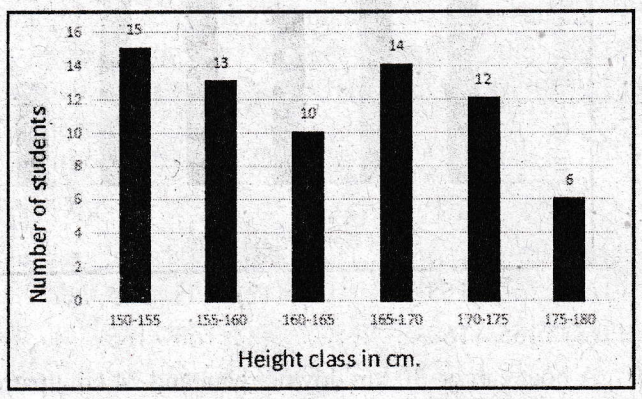
(1) 176 (2) 234
(3) 216 (4) 198

44. In an examination, 48% of candidates passed in science and 56% failed in mathematics. If 32% failed in both subjects, then what percent passed in both subjects?
(1) 28% (2) 22%
(3) 24% (4) 32%

45. PA and PB are two tangents from a point P outside a circle with centre O. If A and B are points on the circle such that $\angle APB = 80°$. then $\angle OAB$ is equal to :
(1) 50° (2) 40°
(3) 55° (4) 45°

46. $\frac{5.75\times5.75\times5.75+3.25\times3.25\times3.25}{57.5\times57.5+32.5\times32.5-57.5\times32.5}$ is equal to:
(1) 0.0009 (2) 0.009
(3) 0.9 (4) 0.09

47. In the given histogram, the number of students whose height is in the class interval 175 - 180 is what percent less than the number of students whose height is in the class interval 160-165?



(1) $\frac{200}{3}\%$ (2) 40%
(3) $\frac{50}{3}\%$ (4) 60%

48. What is the ratio of the mean proportional between 8.1 and 3.6 and the third proportional of 2 and 3?
(1) 6 : 5 (2) 4 : 5
(3) 5 : 6 (4) 5 : 4

49. A sphere of radius 5 cm is melted and recast into spheres of radius 2 cm each. How many such spheres can be made?
(1) 16 (2) 15
(3) 17 (4) 18

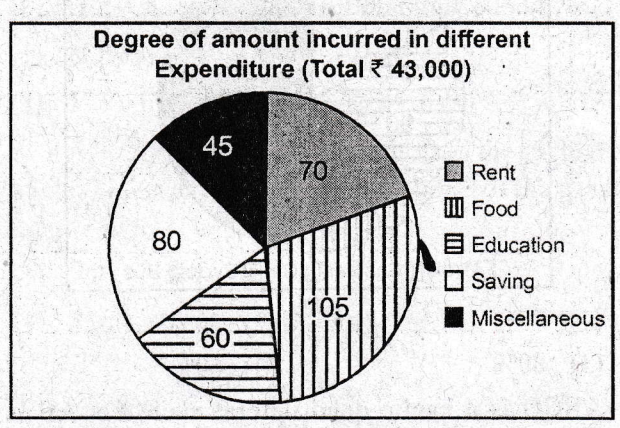
50. A, B and C started a business by investing ₹55,000, ₹65,000 and ₹75.000 respectively. A is a working partner and gets 20% of the profit as working allowance and remaining is distributed in the proportion of their investment. If the money received by C is ₹27,000 what is the total profit?
(1) ₹70,200 (2) ₹87,750
(3) ₹76,850 (4) ₹85,500

Answers

1. (2)	2. (1)	3. (3)	4. (3)	5. (1)
6. (1)	7. (3)	8. (1)	9. (1)	10. (2)
11. (1)	12. (4)	13. (3)	14. (2)	15. (4)
16. (2)	17. (1)	18. (2)	19. (2)	20. (1)
21. (2)	22. (2)	23. (3)	24. (1)	25. (2)
26. (3)	27. (1)	28. (4)	29. (4)	30. (2)
31. (4)	32. (3)	33. (3)	34. (3)	35. (1)
36. (1)	37. (2)	38. (2)	39. (4)	40. (2)
41. (2)	42. (3)	43. (2)	44. (3)	45. (2)
46. (4)	47. (2)	48. (1)	49. (2)	50. (2)

3. SSC CPO SI EXAM PAPER-2018
Exam Time :10:00 AM - 12:00 PM
Exam Date :13/03/2019

1. In the given pie-chart. the amount spend on education is what percent of the savings?



(1) 80% (2) 60%
(3) 70% (4) 75%

2. Two numbers are in the ratio 5 : 11. If their HCF is 24, then the sum of two these numbers is:
(1) 384 (2) 408
(3) 120 (4) 264

3. One side of a rhombus is 26 cm and one of the diagonal is 48 cm. What is the area of the rhombus?
(1) 624 cm^2 (2) 580 cm^2
(3) 520 cm^2 (4) 480 cm^2

4. If the seven digit number $56x34y4$ is divisible by 72, then what is the least value of $(x + y)$?
(1) 8 (2) 12
(3) 5 (4) 14

5. ABCD is a cyclic quadrilateral such that is the diameter of the circle circumscribing it and $\angle ADC = 155°$. then what is the measure of $\angle BAC$?

(1) 35° (2) 55°
(3) 65° (4) 45°

6. In a class of 70 students, 40% are girls and remaining are boys. The average marks of the boys are 63 and that of the girls are 70. What is the average marks of the whole class?

(1) 65.4 (2) 65.8
(3) 65.2 (4) 64.8

7. The sides of a triangle are 16 cm, 30 cm and 34 cm respectively. At each vertices, circles of radius 7 cm are drawn. What is the area of the triangle. excluding the portion covered $\left(\pi = \frac{22}{7}\right)$

(1) 172 cm² (2) 163 cm²
(3) 196 cm² (4) 86 cm²

8. If $a^3 - b^3 = 1603$ and $(a - b) = 7$, then $(a + b)^2 - ab$ is equal to:

(1) 458 (2) 338
(3) 229 (4) 648

9. If a train runs with the speed of 36 km/h, it reaches its destination 15 minutes late. However, if its speed is 45 km/h. it is late by only 4 minutes. The correct time to cover its journey in minutes is:

(1) 22 (2) 27
(3) 25 (4) 40

10. From a point P outside the circle with centre O. two tangents PA and PB are drawn to meet the circle at A and B respectively. If $\angle APB = 70°$. then $\angle OAB$ is equal to:

(1) 35° (2) 65°
(3) 45° (4) 55°

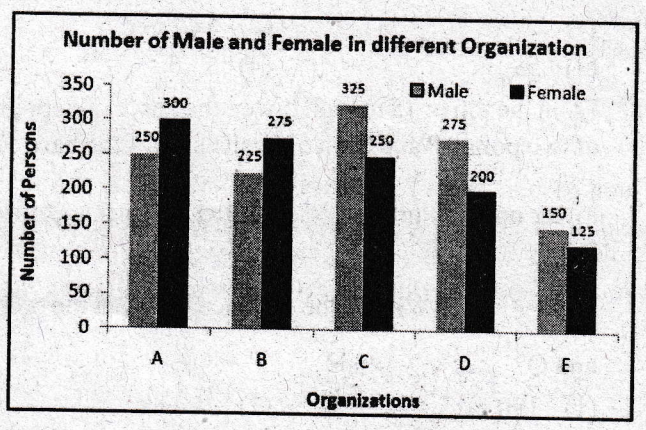
11. The price sugar has increased by 18%, By what percentage can a person decrease the consumption so that, there is no change in the expenditure? (correct to one decimal place)

(1) 15.9% (2) 15.7%
(3) 15.5% (4) 15.3%

12. 18 persons working 8 hours a day can complete 3 units of works in 10 days. How many persons are required to complete 5 units of that work in 16 days working 6 hours a day?

(1) 25 (2) 15
(3) 20 (4) 9

13. In the given bar graph, what is the average number of females in all five organisations?



(1) 245 (2) 235
(3) 230 (4) 225

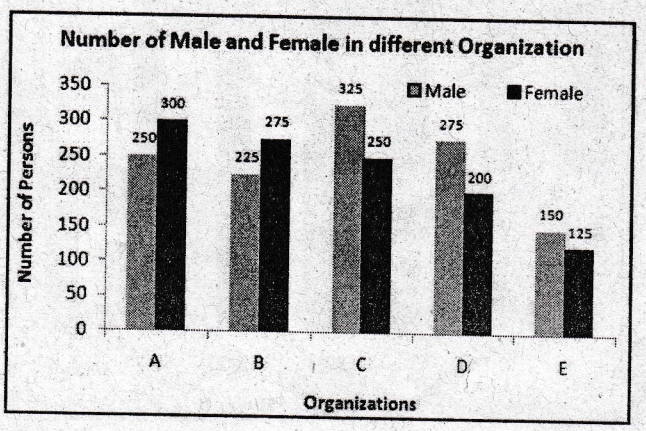
14. A boat can go 20 km downstream and 30 km upstream in 2 hours 20 minutes. Also, it can go 10 km downstream and 8 km upstream in 49 minutes. What is the speed of boat downstream in km/h?

(1) 18 (2) 20
(3) 16 (4) 24

15. The value of $\sin^2 30° \cdot \cos^2 45° + 2\tan^2 30° - \sec^2 60°$ is equal to :

(1) $-\frac{13}{12}$ (2) $-\frac{77}{24}$
(3) $-\frac{25}{12}$ (4) $-\frac{1}{12}$

16. In the given bar graph, what is the ratio of the total males and females working in all organisations?



(1) 49 : 46 (2) 35 : 46
(3) 46 : 40 (4) 46 : 35

17. The average of 22 numbers is 52. The average of the first 8 numbers is 48 and the average of next 11 numbers is 54. The 20th number is 7 less than the 21th number and 21st number is 4 more than 22nd number. What is the average of the 20th and 22nd numbers?

(1) 52 (2) 52.5
(3) 53 (4) 53.5

18. From the top of 75 m high tower, the angle of depression of two points P and Q on opposite side of the base of the tower on level ground is θ and ϕ, such that $\tan\theta = \frac{3}{4}$ and $\tan\phi = \frac{5}{8}$. What is the distance between the points P and Q?

(1) 190 m (2) 200 m
(3) 180 m (4) 220 m

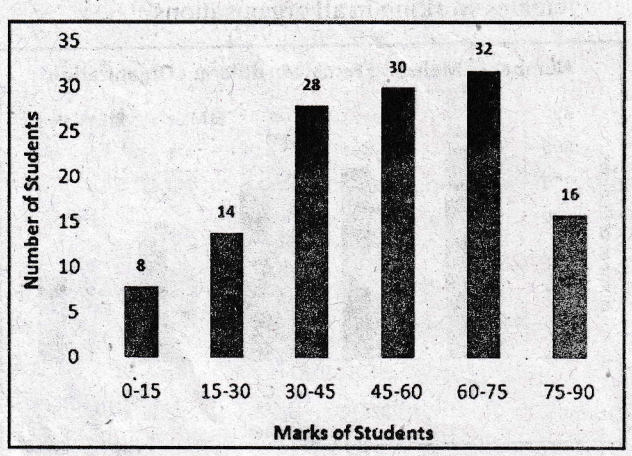
19. The radius of a cylinder is increased by 150% and its height is increased by 50%. What is the percentage increase in its volume?

(1) 375% (2) 625.5%
(3) 775.75% (4) 837.5%

20. A, B and C started a business by investing ₹27,500, ₹ 32,500 and ₹37,500 respectively. A is a working partner and gets 20% of profit as working allowance and the remaining is distributed in proportion of their investments. If the money received by C is ₹13,500, What is total profit?

(1) ₹35,100 (2) ₹38,425
(3) ₹42.750 (4) ₹43,875

21. In the given histogram, what percentage of students got marks less than 45? (Correct to one decimal place)



(1) 39.4% (2) 39.1%
(3) 39.6% (4) 38.8%

22. The Square root of which of the following is a rational number?

(1) 2361.96 (2) 2758.28
(3) 72568.4 (4) 62504.9

23. What is the sum of the digits of the least number, which when divided by 15. 15 and 27 leaves the same remainder 9 in each case and is also completely divisible by 11?

(1) 20 (2) 17
(3) 18 (4) 19

24. $\frac{6.75\times6.75\times6.75+4.25\times4.25\times4.25}{67.5\times67.5+42.5\times42.5-67.5\times42.5}$ is equal to:

(1) 2.5 (2) 0.25
(3) 0.0025 (4) 0.025

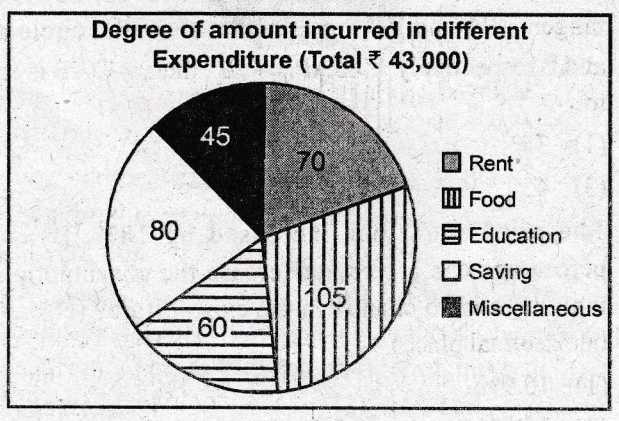
25. A shopkeeper marks an amide at a price such that afier giving a discount of 25%. the gains x%. If the cost price and the marked price of the article are ₹460 and ₹736 respectively. what is the value of x?

(1) 20% (2) 18%
(3) 24% (4) 16%

26. Let $\Delta ABC \sim \Delta RPQ$ and $\frac{or(\Delta ABC)}{or(\Delta PQR)} = \frac{1}{4}$. If PQ = 4cm, QR = 6 cm and PR = 7 cm, then AC is equal to.

(1) 2 cm (2) 4 cm
(3) 3 cm (4) 3.5 cm

27. In the given pie-chart, total expenditure together on rent and education is what percent less than total expenditure of food and miscellaneous items?



(1) 26% (2) 30%
(3) $\frac{200}{13}$% (4) $\frac{40}{3}$%

28. $5\frac{1}{5}-\left[3\frac{1}{2}-\left\{\frac{5}{6}-\left(\frac{3}{5}+\frac{1}{10}-\frac{4}{15}\right)\right\}\right]$ is equal to:

(1) $\frac{21}{10}$ (2) $\frac{7}{5}$

(3) $\frac{7}{3}$ (4) $\frac{8}{3}$

29. The efficiencies of A, B and C are in the ratio 2 : 5 : 7 working together, they can complete a work in 10 days. In how many days will. A alone be able to complete 30% of that work?

(1) 20 (2) 28

(3) 30 (4) 21

30. In an examination, 53% of the candidates failed in science and 48% failed in mathematics. If 40% failed in both subjects, what percentage passed in both subjects?

(1) 51% (2) 39%

(3) 49% (4) 43%

31. Two pipes A and B can fill an empty tank in 10 hours and 16 hours respectively. They are opened alternately for 1 hour each, starting with pipe A first. In how many hours, the empty tank will be filled?

(1) $12\frac{1}{3}$ (2) $12\frac{1}{8}$

(3) $12\frac{1}{4}$ (4) $12\frac{1}{6}$

32. The successive discounts of 20%, 10% and 8% is equivalent to a single discount of:

(1) 66.24% (2) 32.84%

(3) 38% (4) 33.76%

33. If $\sin(A+B)=\frac{\sqrt{3}}{2}$ and $\tan(A-B)=\frac{1}{\sqrt{3}}$, then (2A + 3B) is equal to :

(1) 120° (2) 135°

(3) 130° (4) 125°

34. A sum of ₹12,000 is invested for 15 months at 10% per annum compounded half yearly. What is the percentage gain, at the end of 15 months. correct to one decimal place?

(1) 13.0% (2) 13.1%

(3) 12.8% (4) 12.9%

35. What is the ratio of mean proportional between 1.8 and 3.2 and the third proportional of 5 and 3?

(1) 3 : 5 (2) 4 : 3

(3) 3 : 4 (4) 5 : 3

36. In ΔABC, $\angle A = 40°$. If the bisectors of the $\angle B$ and $\angle C$, meet at a point O. then $\angle BOC$ is equal to:

(1) 130° (2) 90°

(3) 70° (4) 110°

37. Pipes A and B can fill a tank in 12 hours and 16 hours respectively and pipe C can empty the full tank in 24 hours. All three pipes are opened together, but after 4 hours pipe A is closed. In how many hours from the beginning the tank be filled?

(1) 24 (2) 28

(3) 30 (4) 32

38. 8 cubes, each of edge 5 cm, are joined end to end. What is the total surface area of the resulting cuboid?

(1) 850 cm^2 (2) 825 cm^2

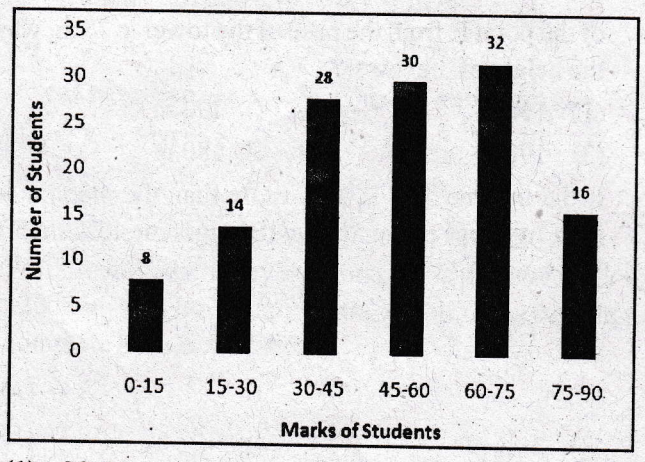
(3) 1200 cm^2 (4) 800 cm^2

39. A shopkeeper sold two articles for ₹9639 each. On one, he gained 19% and on the other, he lost 19%. What is the overall percentage gain or loss?

(1) 3.81% loss (2) 3.61% gain

(3) 3.81% gain (4) 3.61% loss

40. In the given histogram, in which class interval, the median marks lies?



(1) 30-45 (2) 45-60

(3) 60-75 (4) 15-30

41. If $(x+4)^3+(2x+1)^3+(2x+5)^3=(3x+12)(2x+1)(2x+5)$, then what is the value of x?

(1) –3 (2) –2

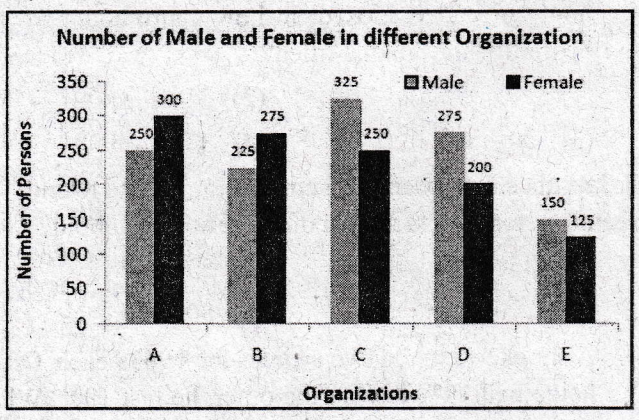
(3) 2 (4) 3

42. The value of $3\frac{5}{6}+\left[3\frac{2}{3}-\left\{\frac{15}{4}\left(5\frac{4}{5}\div 14\frac{1}{2}\right)\right\}\right]$ is equal to:

(1) $\frac{37}{6}$ (2) $\frac{35}{6}$

(3) 6 (4) $\frac{19}{3}$

43. In the given bar graph, in which organisation, the percentage difference between the males and females is maximum, by considering total persons in that organisation as base?



(1) D (2) E

(3) B (4) C

44. The angle of elevation of top of a tower from a point P, on the ground is θ such that tan θ $\tan\theta=\frac{12}{5}$. If distance of the point P, from the base of the tower is 75 m, what is the height of the tower?

(1) 160 m (2) 200 m

(3) 190 m (4) 180 m

45. If the income of A is 40% more than the income of B, then by what percentage is B's income less than that income of A?

(1) $\frac{230}{7}\%$ (2) 56%

(3) 25% (4) $\frac{200}{7}\%$

46. If $x+\frac{1}{x}=8$, then $x^2+\frac{1}{x^2}$ is equal to :

(1) 62 (2) 68

(3) 64 (4) 66

47. A sum of ₹15,600 is invested partly at 7% per annum and the remaining at 9% per annum simple interest. If the total interest at the end of 3 years is ₹3,738. how much money was invested at 7% per annum?

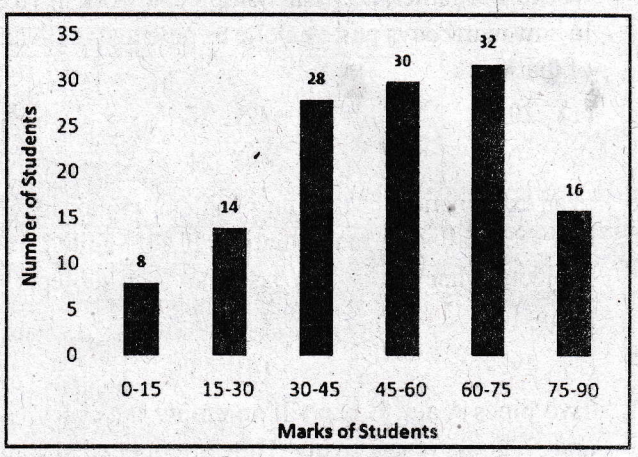
(1) ₹7,800

(2) ₹7,900

(3) ₹7,600

(4) ₹7,700

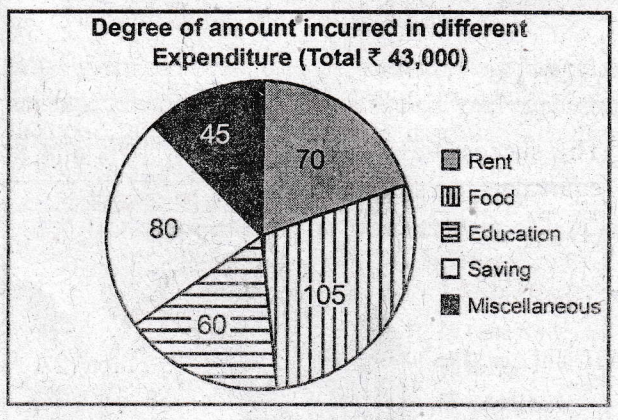
48. In the given histogram, what is the mean marks of the students. correct to one decimal place?



(1) 51.2 (2) 53.5

(3) 52.7 (4) 50.6

49. In the given pie-chart, what is the total expenditure on rent?



(1) ₹8,400 (2) ₹8,600

(3) ₹8,800 (4) ₹8,900

50. A sphere of radius 7 cm is melted and recast into small spheres of radius 2 cm each. How many such spheres can be made?

(1) 40 (2) 42

(3) 41 (4) 43

Answers

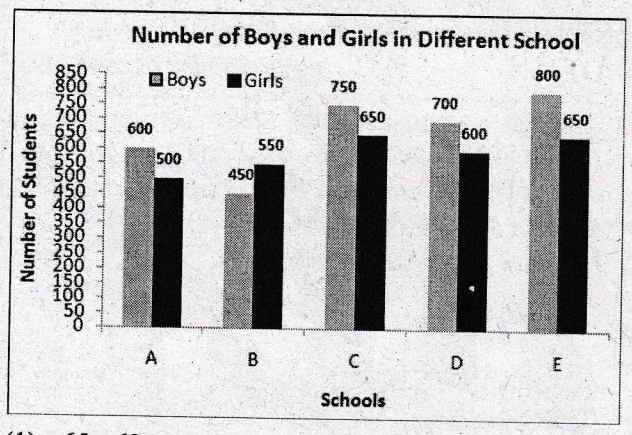
1. (4)	2. (1)	3. (4)	4. (3)	5. (3)
6. (2)	7. (2)	8. (3)	9. (4)	10. (1)
11. (4)	12. (1)	13. (3)	14. (4)	15. (2)
16. (1)	17. (4)	18. (4)	19. (4)	20. (4)
21. (2)	22. (1)	23. (3)	24. (4)	25. (1)
26. (3)	27. (4)	28. (1)	29. (4)	30. (2)
31. (3)	32. (4)	33. (4)	34. (1)	35. (2)
36. (4)	37. (4)	38. (1)	39. (4)	40. (2)
41. (2)	42. (3)	43. (1)	44. (4)	45. (4)
46. (1)	47. (2)	48. (4)	49. (1)	50. (2)

4. SSC CPO SI EXAM PAPER-2018

Exam Time : 3:00 PM - 5 :00 PM

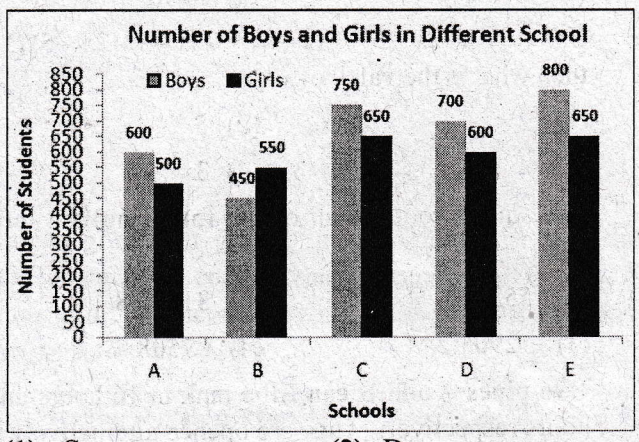
Exam Date :13/03/2019

1. If a train rims with the speed of 52 km/h, it reaches its destination late by 15 minutes. However. if its speed is 65 km/h, it is late by 5 minutes only. The right time for the train to cover its journey is:
   (1) 40 minutes (2) 35 minutes
   (3) 45 minutes (4) 30 minutes
2. A sphere of radius 9 cm is melted and recast into small spheres of radius 2 cm each. How many such sphere can be made?
   (1) 92 (2) 90
   (3) 93 (4) 91
3. In the given bar graph, what is the ratio of the total boys and girls in all schools?



   (1) 65 : 63 (2) 66 : 59
   (3) 65 : 58 (4) 59 : 66
4. Ina class of 45 students, 40% are boys and rest are girls. The average weight of the girls is 55 kg and that of boys is 65 kg. What is the average weight (in kg) of the whole class?
   (1) 60 kg (2) 61 kg
   (3) 58 kg (4) 59 kg
5. If $(x-3)^2+(2x-5)^3+(x-4)^3=(3x-9)(2x-5)(x-4)$, then what is the value of x?
   (1) 2 (2) 5
   (3) 4 (4) 3
6. The square root which of the following is a rational number?
   (1) 5535.36 (2) 3152.88
   (3) 72905.2 (4) 67508.5
7. Two pipes A and B can fill a tank in 16 hours and 20 hours respectively. They are opened alternatively for 1 hour each. starting with pipe A first. In how may hours with the empty tank be filled?
   (1) $17\frac{3}{4}$ (2) $17\frac{1}{5}$
   (3) $17\frac{3}{5}$ (4) $17\frac{1}{14}$
8. If the seven digit number $3x6349y$ is divisible by 88, then what will be the value of $(2x+3y)$?
   (1) 28 (2) 30
   (3) 32 (4) 35
9. One side of a rhombus is 6.5 cm and one of it's diagonal is 12 cm. What is the area of the rhombus?
   (1) 78 cm^2 (2) 15 cm^2
   (3) 30 cm^2 (4) 60 cm^2
10. If $\sec 2x = \operatorname{cosec}(3x-45°)$. then x is equal to:
    (1) 27° (2) 40°
    (3) 45° (4) 35°
11. The efficiencies of A. B and C are in the ratio 5 : 6 : 8. Working together. they can complete a piece of work in 120 hour's. In how many hours will, B alone be able to complete 40% of that work?
    (1) 152 (2) 182.4
    (3) 167.2 (4) 114
12. The price of sugar has increased by 14%. By what percentage can a person decrease the consumption so that there is an increase in the expenditure by 8% only? (correct to one decimal place)
    (1) 5.9% (2) 5.5%
    (3) 5.3% (4) 5.7%

13. In the given bar graph, in which college, the percentage of boys is the highest?



(1) C (2) D
(3) A (4) E

14. The value of $\frac{\sin^2 60° + \cos^2 30° - \sec 35°.\sin 55°}{\sec 60° + \operatorname{cosec} 30°}$ is equal to :

(1) $\frac{1}{3}$ (2) $\frac{1}{4}$
(3) $\frac{1}{2}$ (4) $\frac{1}{8}$

15. The value of $6\frac{1}{5}\left[4\frac{1}{2} - \left\{\frac{5}{6} - \left(\frac{3}{5} + \frac{3}{10} - \frac{7}{15}\right)\right\}\right]$ is:

(1) 2.1 (2) 2.8
(3) 2.5 (4) 1.8

16. A shopkeeper sold two articles for ₹9,879 each. On one, he gained 11% and on the other. he lost 11%.What is the overall percentage gain or loss?

(1) 1.21% gain (2) 1.25% gain
(3) 1.21% loss (4) 1.25% loss

17. $\frac{63.5 \times 63.5 \times 63.5 + 36.5 \times 36.5 \times 36.5}{6.35 \times 6.35 + 3.65 \times 3.65 - 6.35 \times 3.65}$ is equal to:

(1) 100 (2) 1,000
(3) 1,00,000 (4) 10,000

18. From the top of a 120 m high tower, the angle of depression of the top of a pole is 45° and the angle of depression of the foot of the pole is θ, such that $\tan\theta = \frac{3}{2}$, What is the height of the pole?

(1) 80 m (2) 40 m
(3) 60 m (4) 75 m

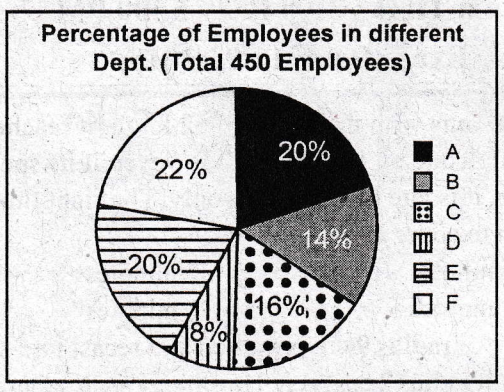
19. What is the ratio of mean proportional between 3.6 and 12.1 and third proportional between 2 and 11?

(1) 11 : 36 (2) 36 : 5
(3) 6 : 5 (4) 6 : 55

20. Pipes A and B can fill a tank in 16 hours and 24 hours respectively whereas pipe C can empty the full tank in 40 hours. All three pipes are opened together. but pipe A is closed after 8 hours. After how many hours. the remaining part of tank will be filled?

(1) 22 (2) 30
(3) 28 (4) 26

21. In the given pie-chart, if the female employees in department D is 75%. then how many male employees are in that department?



(1) 9 (2) 4
(3) 5 (4) 6

22. A boat can go 10 km downstream and 8 km upstream in 49 minutes. Also it can go 12 km downstream and 4 km upstream in 42 minutes. What is the speed of stream in km/h?

(1) 1.5 (2) 2.5
(3) 2 (4) 1

23. A cuboid of edges 32 cm, 4 cm and 4 cm is cut to form cubes of edge 4 cm each. What is the sum of total surface areas of all cubes formed?

(1) 544 cm^2 (2) 640 cm^2
(3) 576 cm^2 (4) 768 cm^2

24. $\frac{17}{30} + \left[3\frac{1}{5} - \left\{\frac{5}{6} - \left(3\frac{4}{5} \div 9\frac{1}{2}\right)\right\}\right]$ is equal to:

(1) $\frac{1}{5}$ (2) $\frac{10}{3}$
(3) $\frac{3}{5}$ (4) $\frac{11}{3}$

25. Two numbers are in the ratio 6 : 11. If their HCF is 28. then the sum of these two numbers is:

(1) 392 (2) 448

(3) 420 (4) 476

26. The sides of a triangle are 24 cm, 45 cm and 51 cm. At each of it's vertices, circles of radius 10.5 cm are drawn. What is the area of the triangle, excluding the portion covered by sectors of the circles? $\left(\pi = \frac{22}{7}\right)$

(1) 327.75 cm^3 (2) 366.75 cm^3

(3) 464.75 cm^3 (4) 244.75 cm^3

27. What is the sum of digits of the least number, which when divided by 15, 18 and 42 leaves the same remainder 8 in each case and is also divisible by 13?

(1) 24 (2) 26

(3) 25 (4) 22

28. If the income of A is 24% less than income of B, then what percentage is B's income is more than that of A?

(1) $\frac{600}{19}\%$ (2) $\frac{600}{29}\%$

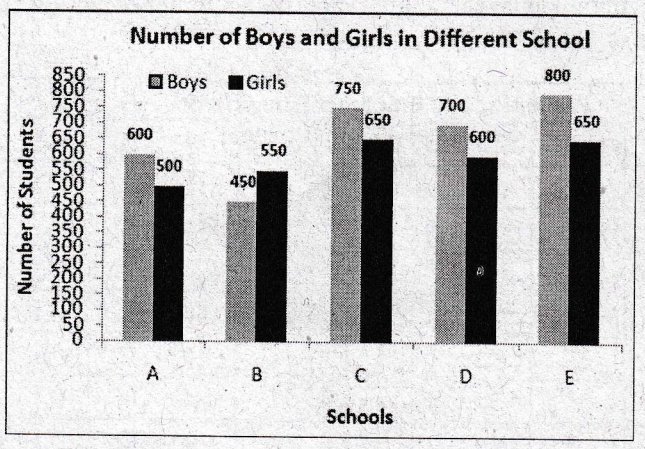
(3) $\frac{600}{17}\%$ (4) $\frac{600}{31}\%$

29. In ΔABC, $\angle A = 70°$. AB AC and are produced to points D and E respectively. If the bisectors of $\angle CBD$ and $\angle BCE$ meet at the point, then $\angle BOC$ is equal to:

(1) 105° (2) 70°

(3) 95° (4) 55°

30. In the given bar graph, what is the average number of girls from all schools?



(1) 575 (2) 595

(3) 590 (4) 580

31. Let $\Delta ABC \sim \Delta RPQ$ and $\frac{or(\Delta ABC)}{or(\Delta PQR)} = \frac{1}{9}$ If AB = 3 cm. BC 4 cm and AC = 5 cm, then PQ is equal to.

(1) 9 cm (2) 15 cm

(3) 12 cm (4) 18 cm

32. If $a^3 - b^3 = 3552$ and $(a - b) = 6$, then $(a - b)^2 - ab$ is equal to:

(1) 568 (2) 618

(3) 636 (4) 592

33. 16 persons working 6 hours a day can complete a work in 10 days. In how many days 24 persons working 8 hours a day will complete 80% of that work?

(1) 4 (2) 3

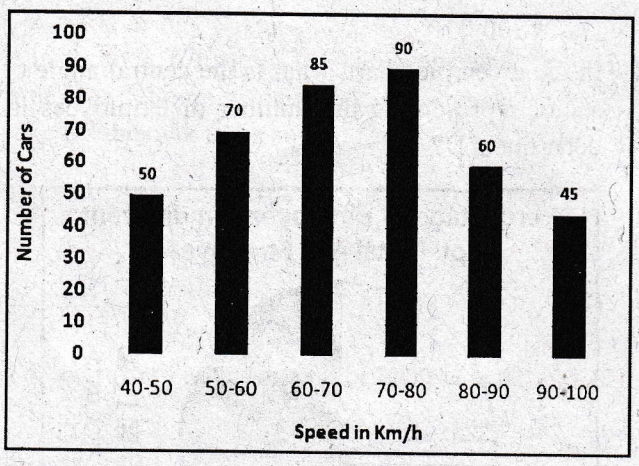
(3) 6 (4) 8

34. A, B and C started a business by investing ₹1,37,500 and ₹162,500 and ₹1,87,500 respectively. A is a working partner and gets 20% of the profit as working allowance and remaining is distributed in the proportion of their investment. If the total profit is ₹2,19,375,what is the share of C?

(1) ₹64,500 (2) ₹62,700

(3) ₹67,500 (4) ₹88,600

35. In the given histogram, what percentage of cars were running with the speed less than 60 km/h?



(1) 28% (2) 30%

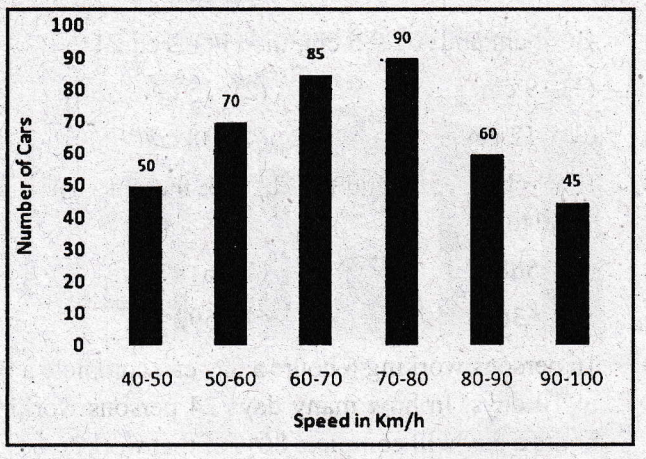
(3) 25% (4) 35%

36. A sum of ₹10,000 is invested for 17 months at 8% per annum compounded half yearly. What is the percentage gain at the end of 17 month. nearest to one decimal place?

(1) 12.0% (2) 12.4%

(3) 11.8% (4) 12.2%

37. In the given histogram. what is the mean speed of cars (in km/h) to nearest Whole number?

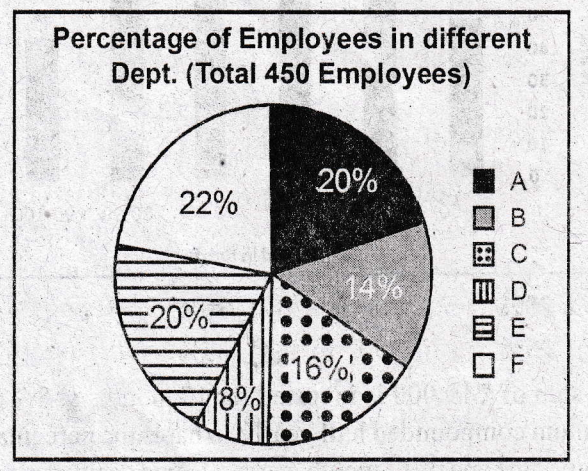


(1) 71 (2) 70
(3) 72 (4) 69

38. The successive discounts of 30%. 25% and 15% is equivalent to a single discount of:
(1) 54.625%
(2) 55.375%
(3) 60.275%
(4) 60.725%

39. A shopkeeper marks the price of an article such that after giving a discount of 30%, he gains 20%. If the marked price of the article is ₹480. what is the cost price of the article?
(1) ₹250 (2) ₹260
(3) ₹300 (4) ₹280

40. In the given pie-chart, what is the central angle of the sector representing the number of employees in the department D?



(1) 29.6° (2) 28.8°
(3) 29.2° (4) 29.8°

41. The average of 20 numbers is 65. The average of the first 9 numbers is 68 and the average of next 8 numbers is 62. If the 18th number is 3 more than 19th number and 9 less than 20th number. then what is the average of 19th and 20th number?
(1) 64.5 (2) 66
(3) 65 (4) 65.5

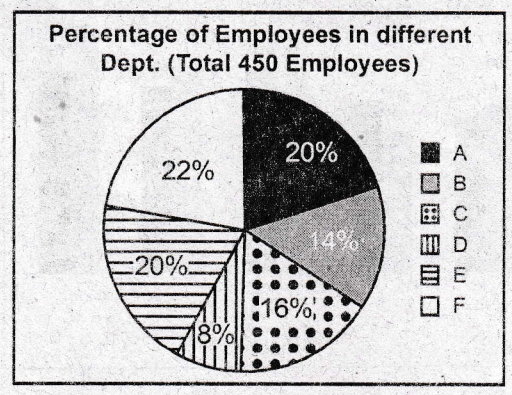
42. The length of shadow of a vertical pole on the ground is 24 m. If the angle of elevation of the sun at that time is θ, such that $\sin\theta = \frac{5}{13}$, then what is the height of the pole?
(1) 18 m (2) 12 m
(3) 8 m (4) 10 m

43. A sum of ₹10,200 is invested partly at 8% per annum and remaining at 6% per annum for 3 years at simple interest. If the total interest is ₹2,124, how much money was invested at 6% per annum?
(1) ₹4,800 (2) ₹4,900
(3) ₹5,200 (4) ₹5,400

44. The radius of a cylinder is increased by 60% and radius of base is decreased by 20%. What is percentage increase in it's volume?
(1) 105.6% (2) 105.2%
(3) 104.8% (4) 105.8%

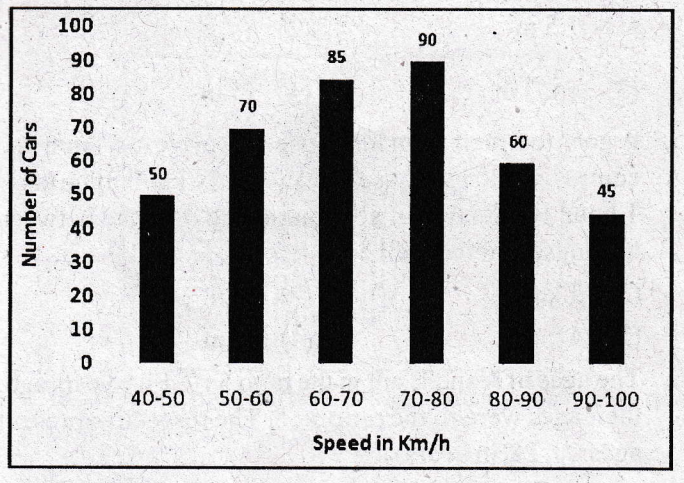
45. PA and PB are two tangents from a point P outside the circle with centre O. If A and B are points on the circle such that ∠APB = 110°, then ∠OAB is equal to:
(1) 45° (2) 55°
(3) 35° (4) 70°

46. In the given pie-chart. what is the number of employees working in department A?



(1) 80 (2) 85
(3) 90 (4) 960

47. In the given histogram, in which class interval, the median lies?



(1) 60-70 (2) 80-90
(3) 70-80 (4) 50-60

48. If $x+\frac{1}{x}=7$, then $x^3+\frac{1}{x^3}$ is equal to:

(1) 343 (2) 322
(3) 385 (4) 364

49. In an examination, 47% passed in science and 51% failed in mathematics. If 42% failed in both subjects, what percentage passed in both subjects?

(1) 36% (2) 40%
(3) 38% (4) 42%

50. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and $\angle ADC = 160°$. What is the measure of the $\angle BAC$?

(1) 65° (2) 70°
(3) 75° (4) 60°

Answers

1. (2)	2. (4)	3. (2)	4. (1)	5. (4)
6. (1)	7. (1)	8. (3)	9. (3)	10. (1)
11. (1)	12. (3)	13. (4)	14. (4)	15. (1)
16. (3)	17. (4)	18. (2)	19. (4)	20. (1)
21. (1)	22. (3)	23. (4)	24. (2)	25. (4)
26. (2)	27. (2)	28. (1)	29. (4)	30. (3)
31. (3)	32. (4)	33. (1)	34. (3)	35. (2)
36. (3)	37. (4)	38. (2)	39. (4)	40. (2)
41. (3)	42. (4)	43. (4)	44. (3)	45. (2)
46. (3)	47. (1)	48. (2)	49. (3)	50. (2)

5. SSC CPO SI EXAM PAPER-2018
Exam Time: 10:00 AM - 12:00 PM
Exam Date: 14/03/2019

1. A, borrowed ₹28,500 at 8% p.a. interest compounded annually. If ₹5,780 was paid at the end of first year, then the outstanding amount at the end of second year is:

(1) ₹30,780.00 (2) ₹33,242.40
(3) ₹27,462.40 (4) ₹27,000.00

2. Which of the following statement is true?

(1) TWO prime numbers are co-prime numbers if their LCM is 1.
(2) LCM of two natural numbers is divisible by their HCF.
(3) HCF + LCM of two numbers = Product of the two numbers
(4) HCF of two numbers is the smallest common divisor of both numbers.

3. In the given figure, XYZ is an equilateral triangle $\angle XAY = 40°$, $\angle XBZ = 30°$. then $\angle AXB$ is equal to:

(1) 80° (2) 110°
(3) 90° (4) 6

4. The single discount equivalent to two successive discounts of 12% and 8% is: (rounded off)

(1) 19% (2) 20%
(3) 18% (4) 17%

5. A tank can be filled by pipe A in 5 hours and emptied by pipe B in 8 hours respectively. How much time will it take for the tank to be half full?

(1) $3\frac{1}{3}$ h (2) $12\frac{1}{3}$ h
(3) $8\frac{2}{3}$ h (4) $6\frac{2}{3}$ h

6. The average of all prime numbers between 10 and 25 is:

(1) 16.6 (2) 14.7
(3) 18.67 (4) 15.3

7. One-fourth of a tank can be filled in 3 hours by pipe A and one-third of the same tank can be filled in 2 hours by pipe B. How long will it take for the tank to be filled if both the pipes are kept open?

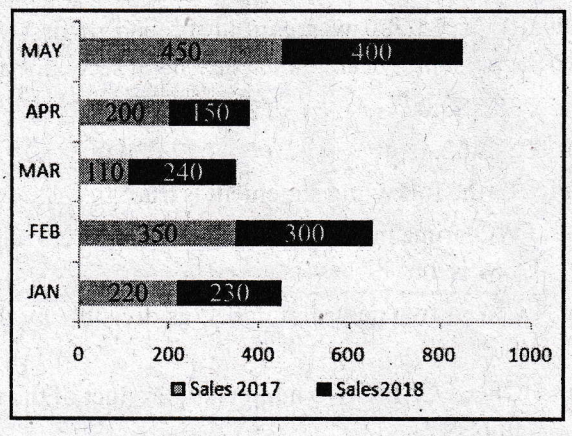
(1) 5 h (2) 4 h
(3) $2\frac{1}{2}$ h (4) 2 h

8. The number 23474 is exactly divisible by:

(1) 2 and 11 only (2) 2 and 3 only

(3) 2 and 4 only (4) 2 only

9. The given bar chart shows the details of cycle sales by a company between January and May for years 2017 and 2018.



In the given bar-chart, which month sales show the maximum decrease in 2018 as compared to 2017?

(1) January (2) May

(3) April (4) February

10. T h e l e n g t h o ² f is.

(1) 8 m (2) 4 m

(3) $8\sqrt{2}$ m (4) $4\sqrt{2}$ m

11. A, B and C are partners. They share profits in the ratio of 5 : 3 : 6. If A earns ₹1,92,380 as his share of profit, then the share of C is:

(1) ₹82,449 (2) ₹1,15,428

(3) ₹1,60,317 (4) ₹2,30,856

12. A trader marks the products 25% above the cost price and allows a discount of 15%. If the cost price is ₹2,080, then the selling price is:

(1) ₹2,392 (2) ₹2,600

(3) ₹1,809 (4) ₹2,210

13. The average age of a cricket team of eleven players is 27 years. If two more players are included in the team the average becomes 26 years, then the average age (in years) of the two included players is:

(1) 26 (2) 27

(3) 24.5 (4) 20.5

14. The strirlg of a kite is 30 m long and it makes an angle 60° with the horizontal. The height of the kite above the ground is:

(1) 7.5 m (2) $15\sqrt{3}$ m

(3) $10\sqrt{3}$ m (4) 15 m

15. A goes to a mall from his house on a cycle at 8 km/h and comes back to his house on a cycle at 6 km/h. If he takes 1 hour 10 minutes in all, what is the distance between his house and the mall?

(1) 5 km (2) 6 km

(3) 4 km (4) 8 km

16. The ages of A and B are in the ratio 5 : 7. Five years ago, their ages were iii the ratio 5 : 8. The respective present ages 20, 28(in years) are:

(1) 20, 28

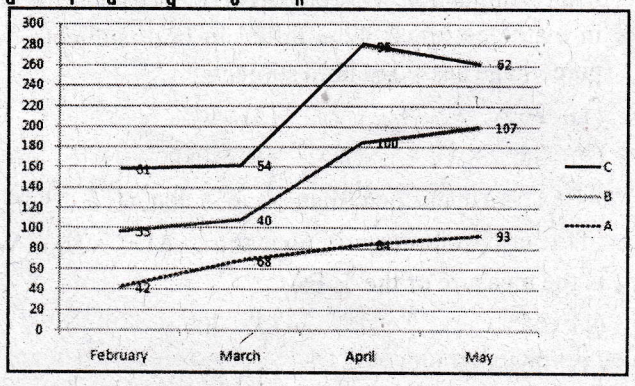
(2) 15, 21

(3) 10, 14

(4) 25, 40

17. The line graph shows electricity consumption (in units) for three households A, B and C for months February to May.

d i a g o n



If the per unit rate chart is:

Units	Rate oper unit (₹)
First 50	2.4
Next 50	3.5
Above 100	5.5

In the given line graph, the electricity charges collected from all (A, B and C) for the month of February is:

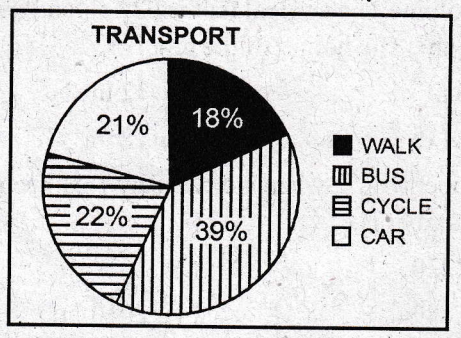
(1) ₹506.8

(2) ₹348.00

(3) ₹474.20

(4) ₹396.80

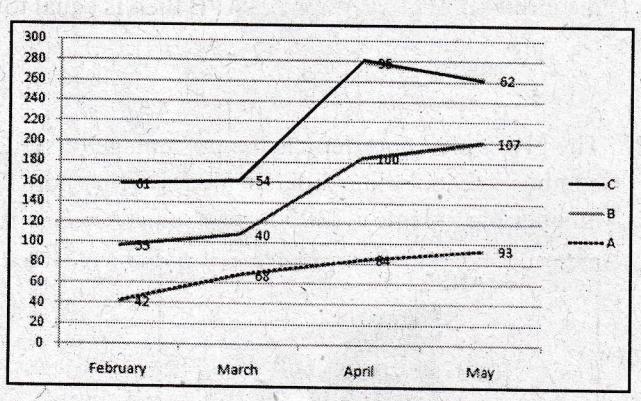
18. The given pie-chart depicts the percentage of students coming to school using different modes of transport. Total number of students = 1300



In the given pie-chart, if 234 students used to walk, then how many come by bus?

(1) 507 (2) 286
(3) 273 (4) 432

19. The line graph shows electricity consumption (in units) for three households A, B and C for months February to May.



In the given line graph, the percentage increase in electricity consumption of 'B' between March and May is:

(1) 85% (2) 95%
(3) 98% (4) 7%

20. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle BAC = 50°. Then angle ADC is equal to:

(1) 130° (2) 150°
(3) 60° (4) 140°

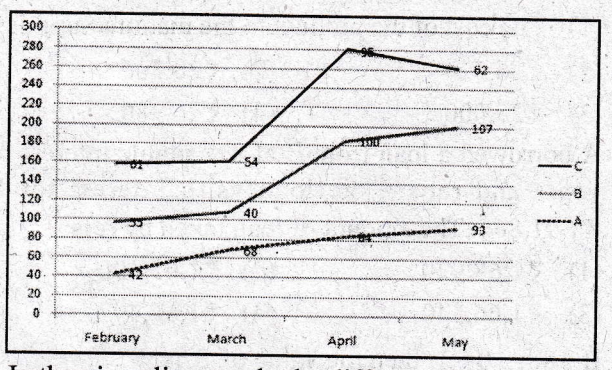
21. The value of $3\times3[6-\{12+15\div(7-2)\}]$ is equal to.

(1) 15 (2) 0
(3) 18 (4) –15

22. Triangle PQR is a right-angled at Q. If PQ=6 cm, PR=10 cm, then QR is equal to:

(1) 5 cm (2) 7 cm
(3) 9 cm (4) 8 cm

23. The line graph shows electricity consumption (in units) for three households A, B and C for months February to May.



In the given line graph, the difference between the total electrical consumption between months of February and April is:

(1) 74 (2) 15
(3) 121 (4) 97

24. The population of a town has increased by 5% at the end of the first year and decreased by 4% at the end of second year. If the population at the end of second year was 55,12,248, then the population at the beginning of first year was:

(1) 56,23,012 (2) 54,68,500
(3) 55,72,950 (4) 53,00,420

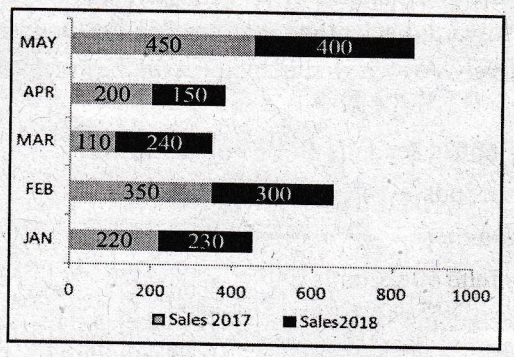
25. The volume of a solid cylinder with height 6 cm is 231 cm^3. The radius of the cylinder is:

(1) 35 cm (2) 21 cm
(3) 2.1 cm (4) 3.5 cm

26. 6 men or 5 women earn ₹14,820 in two days. How much will 4 women and 6 men earn in one day?

(1) ₹13,338 (2) ₹13,832
(3) ₹27,664 (4) ₹26,676

27. The given bar chart shows the details of cycle sales by a company between January and May for years 2017 and 2018.



In the given bar-chart, what is the total increase or decrease in percentage sale in 2018?

(1) 3% increase (2) 1.5% increase
(3) 1.5% decrease (4) 3% decrease

28. A manufacturer sells the product to a wholesaler at 6% profit, the wholesaler sells the product to a retailer at 8% profit and the retailer sells the product to his customer at 10% profit. The price paid by the customer is ₹31,48 (2) The cost of the product to the manufacturer is:

(1) ₹26,524 (2) ₹28,306
(3) ₹25,000 (4) ₹26,980

29. A borrowed a loan from B at 8% simple interest for 2 years and repaid the loan vsith interest totaling ₹1,91,864. The amount of loan taken by A is:

(1) ₹1,68,920 (2) ₹1,65,400
(3) ₹1,66,540 (4) ₹1,64,492

30. If $2 \sin 3\theta = 1$, then the value of θ is:

(1) 30° (2) 20°
(3) 10° (4) 45°

31. The HCF and LCM of two numbers is 6 and 5040 respectively, If one of the numbers is 210, then the other number is:

(1) 30 (2) 144
(3) 630 (4) 256

32. Three cubes With edges 6 cm each are joined end to end to form a cuboid. The total surface area of the cuboid is:

(1) 432 cm^2 (2) 504 cm^2
(3) 648 cm^2 (4) 720 cm^2

33. A can do a work in 12 days while B can do same work in 18 days. How long (in days) will it take if they do the work together?

(1) $7\frac{1}{5}$ (2) $6\frac{2}{3}$
(3) $6\frac{1}{5}$ (4) $5\frac{3}{4}$

34. A and B are at a distance of 1.7 km apart and they start running towards each other at a speed of 8 m/s and 9 m/s respectively. Afier how much time, will they meet each other?

(1) 1 minute 4 seconds
(2) 14 seconds
(3) 14 minutes
(4) 1 minute 40 seconds

35. An alloy contains 32% copper, 24% nickel and rest zinc. How much zinc is present in 12 kg of the alloy?

(1) 672 gm (2) 6.72 kg
(3) 528 gm (4) 5.28 kg

36. To what power –3 should be raised to get –2187?

(1) –5 (2) –7
(3) 7 (4) 5

37. The volume of a conical tent is 924 m^3 and its base area is 154 m^2. The height of the tent is:

(1) 6 m (2) 12 m
(3) 24 m (4) 18 m

38. A number which, when increased by 16% becomes 1914. The number is:

(1) 2220 (2) 1650
(3) 1780 (4) 2010

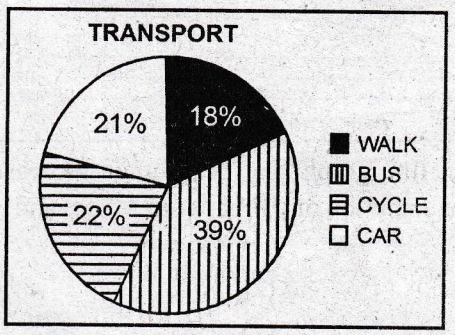
39. The sum of all possible three digit numbers formed by digits 3, 0 and 7, using each digit only once is:

(1) 2010 (2) 2220
(3) 1990 (4) 2110

40. PA and PB are two tangents to a circle with centre O, from a point P outside the circle. A and B are points on the circle. If $\angle OAB = 20°$, $\angle APB$ then is equal to:

(1) 20° (2) 25°
(3) 40° (4) 50°

41. The given pie-chart depicts the percentage of students coming to school using different modes of transport. Total number of students = 1300



In the given pie-chart, the difference between the number of students travel by bus or walk to the number of students travel by car or cycle.

(1) 182 (2) 364
(3) 142 (4) 125

42. The area of each square of a chessboard having 64 equal squares is 4cm^2. If there is a border on all the sides of the chessboard of 2 cm, then the perimeter of the chessboard is:

(1) 128 cm (2) 256 cm
(3) 70 cm (4) 80 cm

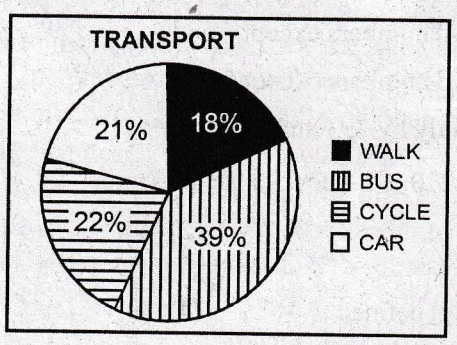
43. From the top of 120 m high lighthouse, the angle of depression of two ships on opposite side of the base of the lighthouse is 30° and 60°. What is the distance between the ships? (rounded oft)

(1) 327 m (2) 177 m
(3) 277 m (4) 127 m

44. If $\cos\theta = \frac{1}{\sqrt{10}}$, then tan θ is equal to:

(1) 3 (2) $\sqrt{3}$
(3) $\frac{1}{\sqrt{3}}$ (4) $\frac{1}{3}$

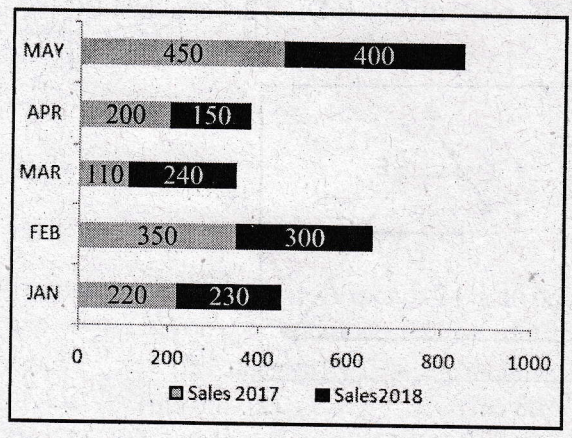
45. The given pie-chart depicts the percentage of students coming to school using different modes of transport. Total number of students = 1300



In the given pie-chart, the percentage difference between students coming by car or bus to coming by walking or cycling.

(1) 25% (2) 30%
(3) 20% (4) 15%

46. The given bar chart shows the details of cycle sales by a company between January and May for years 2017 and 2018.



In the given bar-chart, which month sale shows the maximum increase in 2018 as against 2017'?

(1) April (2) January
(3) May (4) March

47. If $x^2 + \frac{1}{x^2} = 11$, then $x + \frac{1}{x}$ is equal to:

(1) 2 (2) 4
(3) 5 (4) 3

48. If $x + \frac{1}{x} = 4$, then $x^3 + \frac{1}{x^3}$ is equal to:

(1) 64 (2) 76
(3) 68 (4) 72

49. The value $\frac{1}{3} \div \frac{5}{6} \times \frac{-5}{8}$ of is equal to:

(1) $\frac{-1}{4}$ (2) 0
(3) 1 (4) $\frac{1}{4}$

50. If ab + bc + ca = 8 and a + b + c = 12 then $(a^2 + b^2 + c^2)$ is equal to:

(1) 160 (2) 128
(3) 134 (4) 144

Answers

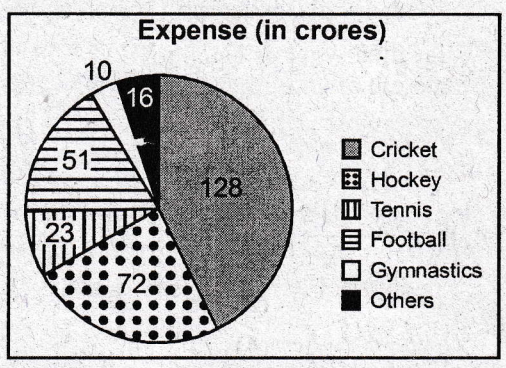
1. (4)	2. (2)	3. (2)	4. (1)	5. (4)
6. (1)	7. (2)	8. (1)	9. (4)	10. (3)
11. (4)	12. (4)	13. (4)	14. (2)	15. (3)
16. (2)	17. (4)	18. (1)	19. (3)	20. (4)
21. (3)	22. (4)	23. (3)	24. (2)	25. (4)
26. (1)	27. (2)	28. (3)	29. (2)	30. (3)
31. (2)	32. (2)	33. (1)	34. (4)	35. (4)
36. (3)	37. (4)	38. (4)	39. (4)	40. (3)
41. (1)	42. (4)	43. (3)	44. (1)	45. (3)
46. (4)	47. (4)	48. (2)	49. (1)	50. (2)

6. SSC CPO SI EXAM PAPER-2018
Exam Time: 3:00 PM - 5:00 PM
Exam Date: 14/03/2019

1. A and B start walking together from a point. Their steps measure 72 cm and 84 cm respectively. What is the minimum distance they should walk so that each takes exact number of steps?

(1) 5.04 m (2) 3.54 m
(3) 6.3 m (4) 2.7 m

2. The given pie-chart depicts the expenditure incurred in crores towards each sport.



In the given pie-chart, what is the difference between the expenditure incurred on cricket and football?

(1) 21 (2) 56
(3) 49 (4) 77

3. A trader marks the cost of a car 24% above its price and allows a discount of 15%. If the discount is ₹2,23,200, then the cost price of the car is:

(1) ₹14,25,000 (2) ₹12,00,000
(3) ₹15,80,000 (4) ₹11,60,000

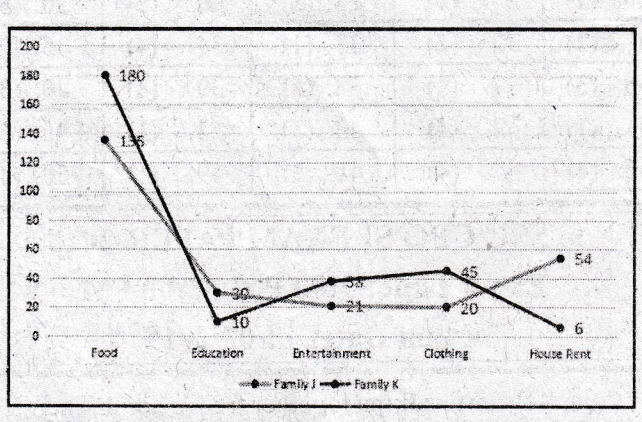
4. The volume of wood required to make a closed box of thickness 2.5 cm with external dimensions 90 cm × 75 cm × 50 cm is:

(1) 69750 cm^3 (2) 49050 cm^3
(3) 36170 cm^3 (4) 46720 cm^3

5. If the surface area of a cube IS 1944m^2, its volume is:

(1) 4912 m^3 (2) 1648 m^3
(3) 2744 m^3 (4) 5832 m^3

6. The line graph shows the monthly expenditure by two families in hundreds:



In the given line graph. what is the difference in percentage of spending on food between Family J and K?

(1) 12.6% (2) 15.2%
(3) 13.7% (4) 14.9%

7. The speed of a boat in still water is 6 km/h. If it takes four times as much time as going upstream as in going same distance downstream, the speed of the stream is:

(1) 2.5 km/h (2) 3.6 km/h
(3) 5 km/h (4) 4.2 km/h

8. Which of the following solids has the highest number of vertices?

(1) Triangular Prism
(2) Hexagonal pyramid
(3) Tetrahedron
(4) Cuboid

9. The number 30744 is divisible by which of the single digit numbers:

(1) Only by 2, 3, 6 and 9
(2) All numbers except 5 and 7
(3) All numbers except 5
(4) Only by 2, 3 and 6

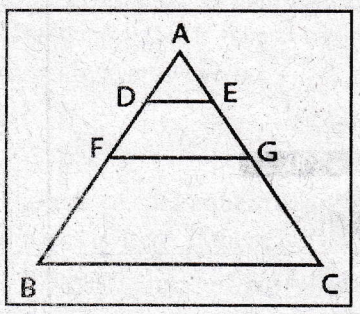
10. $(1 + \cot^2\theta)(1 - \cos^2\theta)$ is equal to:

(1) 0 (2) 1
(3) Not defined (4) $\frac{1}{2}$

11. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle ADC = 130°. Then angle BAC is equal to:

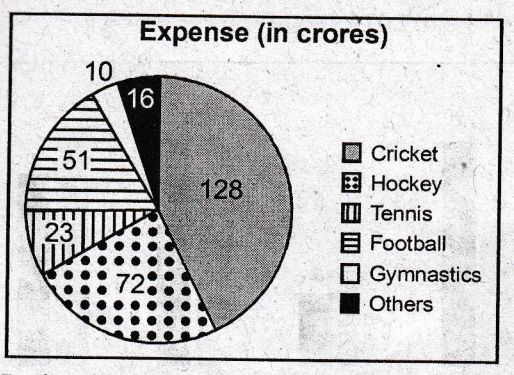
(1) 150° (2) 40°
(3) 50° (4) 60°

12. In the triangle given below, D and E are mid points of AF and AG respectively. F and G are lnid points of AB and AC respectively. If DE = 2.4 cm. then BC is equal to:



(1) 4.8 cm (2) 3.6 cm
(3) 9.6 cm (4) 7.2 cm

13. The given pie-chart depicts the expenditure incurred in crores towards each sport.



In the given pie-chart, what will be the central angle of the sector representing football?

(1) 61.2° (2) 51°
(3) 72.2° (4) 24°

14. A girl walks to school from her house at 5 km/h speed for 24 minutes and cycles back the same distance at 8 km/h. The time taken to cycle back is:

(1) 15 minutes (2) 8 minutes
(3) 10 minutes (4) 21 minutes

15. The efficiency of A is thrice as that of B and efficiency of B is twice as that of C. If B alone can finish a work in 15 days, in how many days A and C together will complete that work?

(1) $4\frac{2}{7}$ (2) $6\frac{1}{2}$
(3) $7\frac{4}{5}$ (4) $4\frac{1}{3}$

16. $\sqrt{4+\sqrt{144}}$ is equal to:

(1) 4 (2) 12.17
(3) 3.74 (4) 14

17. $\frac{3}{5}\times 4\left[7-\left(\frac{2}{5}\times(13+2)\right)\right]$ is equal to:

(1) 0 (2) $\frac{1}{5}$
(3) 1 (4) $2\frac{2}{5}$

18. From the monthly income, A spends 24% on household expenses, 16% on entertainment, 12% on education and saves the rest. Ifsavings are ₹3,288, the monthly income of A is:

(1) ₹6,323 (2) ₹6,480
(3) ₹6,654 (4) ₹6,850

19. The perimeter of floor of a square room is 230 m and height of the room is 5 m. The cost of painting the walls of the room at ₹7.50/m² is:

(1) ₹4,312.50 (2) ₹3,450
(3) ₹8,625 (4) ₹17,250

20. If $x+\frac{1}{x}=4\sqrt{3}$, then $x^2+\frac{1}{x^2}$ is equal to:

(1) 52 (2) 44
(3) 56 (4) 46

21. Nidhi scores 62 marks in Mathematics, 70 in English, 74 in Science. What should be her score in Social Sciences so that she gets an overall 68%?

(1) 65 (2) 68
(3) 67 (4) 66

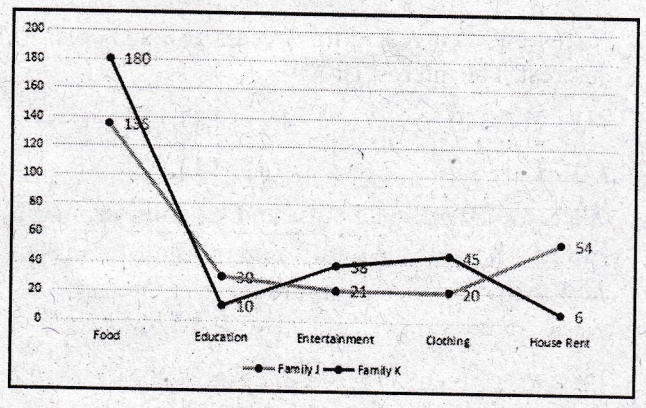
22. The average temperature for a week was 30°C. If the average temperature for first four days of the week was 31°C. then the average temperature for the remaining days of the week is:

(1) 28.5°C (2) 28.67°C
(3) 29.33°C (4) 29°C

23. A boy walks from his house to the park which is 500 m away in 5 minutes and walks backs in 7 minutes. His average speed (in km/h) is:

(1) 5 (2) 1
(3) 2.5 (4) 12

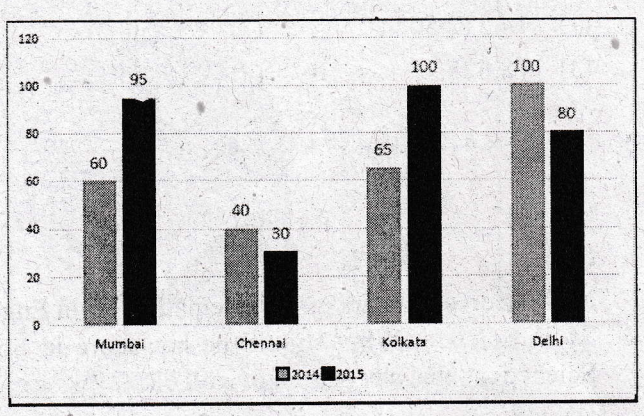
24. The line graph shows the monthly expenditure by two families in hundreds:



In the given line graph, if the monthly income of Family K increases to 33 7,200. What will be the increase in expenditure on entertainment? (Assuming they spend the same proportion as before. round off to one decimal)

(1) 50.7 (2) 43.8
(3) 46.2 (4) 51.9

25. The given bar chart shows the sales of books (in thousands) in four metro branches of a company for the years 2014 and 2015.



In the given bar - chart. which branch has the highest increase in sale (in %) in 2015 as compared to 2014?

(1) Mumbai (2) Kolkata
(3) Delhi (4) Chennai

26. The length, breadth and height of a box are 506 cm, 345 cm and 230 cm respectively. The length of the longest scale that will measure the three dimensions of the box is:

(1) 30 cm (2) 15 cm
(3) 46 cm (4) 23 cm

27. What is the difference between the greatest four digit and the smallest four digit number using the digits 2, 9, 6 and 5 (each digit can be used only once)?

(1) 7083 (2) 6993
(3) 6606 (4) 7056

28. ₹2,64,000 is invested for 3 years at 8.25% p.a. simple interest. The interest is:

(1) ₹65,340 (2) ₹87,120
(3) ₹21,780 (4) ₹43,560

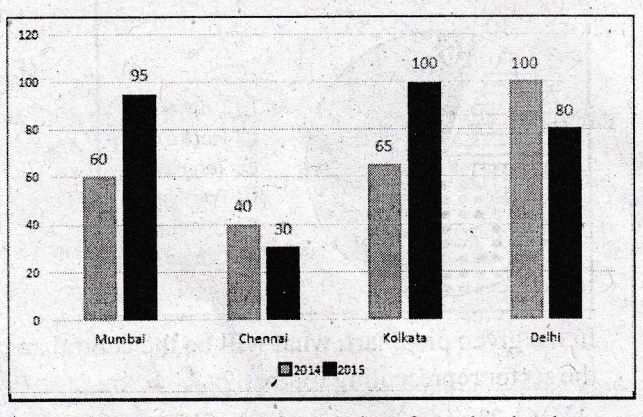
29. There are 50 paisa, 25 paisa and ₹1 coins in a bag in the ratio 5 : 8 : 1. If the total value of all the coins is ₹55. how many 25 paisa coins are there in the bag?

(1) 10 (2) 25
(3) 50 (4) 80

30. A ladder leaning against a wall makes an angle of 60° with the horizontal. If the foot of the ladder is 10 m away from the wall. what is the length of the ladder?

(1) 34.6 m (2) 40 m
(3) 17.3 m (4) 20 m

31. The given bar chart shows the sales of books (in thousands) in four metro branches of a company for the years 2014 and 2015.



In the given bar-chart. the ratio of total sales between Mumbai and Delhi is:

(1) 23 : 25 (2) 26 : 29
(3) 31 : 36 (4) 33 : 37

32. On what sum of money. the interest for one year at 12% p.a. compounded half yearly is ₹1,545?

(1) ₹12,500 (2) ₹12,875
(3) ₹25,750 (4) ₹24,300

33. ₹7,80,516 is divided among A, B, C and D in the proportion of 2 : 3 : 4 : 3. The share ofC is:

(1) ₹1,30,086 (2) ₹2,24,562
(3) ₹2,60,172 (4) ₹1,95,129

34. PA and PB are two tangents to a circle with centre O. from a point P outside the circle. A and B are points on the circle. If $\angle APB = 70°$. then $\angle OAB$ is equal to:

(1) 50° (2) 35°
(3) 20° (4) 25°

35. What percentage is 3 cm in 12 m?

(1) 0.025 (2) 25
(3) 0.25 (4) 2.5

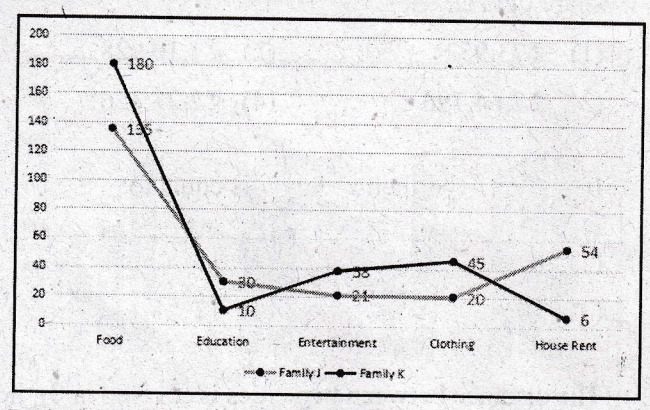
36. The top of a broken tree touches the ground at an angle of 60° and at a distance of 45 m from the base of the tree. The total height of the tree is: (Use $\sqrt{3} = 1.73$ and $\sqrt{2} = 1.41$)

(1) 167.85 m (2) 153.45 m
(3) 141.3 m (4) 137.24 m

37. A mobile cover costing ₹264 is available at a discount of 12%. What would be the selling price of 4 such mobile covers?

(1) ₹940.46 (2) ₹934.04
(3) ₹929.28 (4) ₹936.72

38. The line graph shows the monthly expenditure by two families in hundreds:

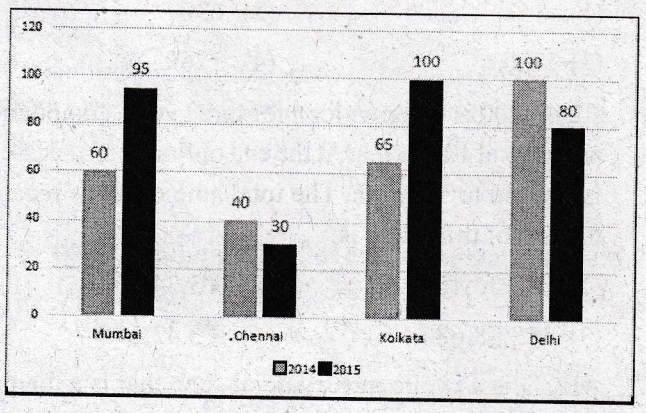


In the given line graph. what is the ratio of the difference in spending between food and education for family J and K?

(1) 21 : 34 (2) 31 : 36

(3) 13 : 25 (4) 9 : 2

39. The given bar chart shows the sales of books (in thousands) in four metro branches of a company for the years 2014 and 2015.



In the given bar-chart, calculate the percentage increment of sales between the year 2014 and 2015 (round off to one decimal).

(1) 14.9% (2) 14.5

(3) 15.1% (4) 13.7

40. A diagonal of a quadrilateral is 40 cm. The length of the perpendiculars from opposite vertices is 7.5 cm and 8.6 cm. The area of the quadrilateral is:

(1) 288 cm^2 (2) 322 cm^2

(3) 434 cm^2 (4) 368 cm^2

41. If $4\tan\theta = 3$, $\frac{5\sin\theta - 3\cos\theta}{5\sin\theta + 3\cos\theta}$ is equal to:

(1) $\frac{1}{9}$ (2) $\frac{1}{3}$

(3) 9 (4) 3

42. The angles of a triangle are $2x - 3$, $x + 12$, $x - 1$. The largest angle of the triangle is:

(1) 55 (2) 42

(3) 94 (4) 83

43. If $(2x-5)^3 + (x-4)^3 + (x-11)^3 = 3(2x-5)(x-4)(x-11)$ then what is the value of x?

(1) 5 (2) 7

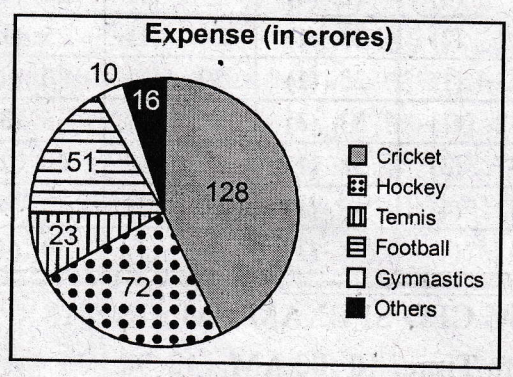
(3) 3 (4) 18

44. If $a^3 - b^3 = 416$ and $a - b$, then $(a+b)^2 - ab$ is equal to:

(1) 38 (2) 32

(3) 52 (4) 42

45. The given pie-chart depicts the expenditure incurred in crores towards each sport.



In the given pie-chart, what is the ratio of expenditure between hockey and gymnastics?

(1) 24 : 17 (2) 64 : 5

(3) 16 : 9 (4) 36 : 5

46. A sells 12 bicycles at a profit of ₹516 per bicycle and sells 3 bicycles at a loss of ₹129 per bicycle. If the total profit percentage on all the bicycles sold is 15%. the cost price per bicycle is:

(1) ₹4440 (2) ₹2960

(3) ₹2580 (4) ₹3870

47. $7 - (4 \times 3 - (-10) \times 8 \div (-4)$ is equal to:

(1) 53 (2) 0

(3) –1 (4) 15

48. 21 typists complete a project in 8 days. In how many days 15 typists will complete the project?

(1) 11.2 (2) 9.3

(3) 7 (4) 5.8

49. Three pipes X, Y and Z discharge three different chemicals A. B and C in a tank. The pipes can fill the tank in 20, 25 and 40 minutes respectively. What will be the proportion of chemical B in the tank, if all the pipes are open for 10 minutes?

(1) $\frac{11}{15}$ (2) $\frac{13}{23}$

(3) $\frac{8}{23}$ (4) $\frac{4}{7}$

50. A pipe can fill a tank in 32 minutes. Due to a leakage, the tank gets filled in 48 minutes. The time the leakage will take to empty the full tank is:

(1) 1 hour 56 minutes (2) 1 hour 42 minutes

(3) 1 hour 20 minutes (4) 1 hour 36 minutes

Answers

1. (1)	2. (4)	3. (2)	4. (1)	5. (1)
6. (1)	7. (2)	8. (4)	9. (3)	10. (2)
11. (2)	12. (3)	13. (1)	14. (1)	15. (1)
16. (1)	17. (4)	18. (4)	19. (3)	20. (4)
21. (4)	22. (2)	23. (1)	24. (1)	25. (1)
26. (4)	27. (1)	28. (1)	29. (4)	30. (4)
31. (3)	32. (1)	33. (3)	34. (2)	35. (3)
36. (1)	37. (3)	38. (1)	39. (3)	40. (2)
41. (1)	42. (4)	43. (1)	44. (3)	45. (4)
46. (3)	47. (4)	48. (1)	49. (3)	50. (4)

7. SSC CPO SI EXAM PAPER-2018

Exam Time: 10 :00 AM - 12:00 PM

Exam Date: 15/03/2019

1. The sides of a triangle are in the ratio 3 : 4 : 5. If the perimeter of the triangle is 24 cm, its area is:

(1) 18 cm^3 (2) 24 cm^3

(3) 20 cm^3 (4) 22.89 cm^3

2. In an office of 1200 employees, the ratio of urban to rural members of staff is 8 : 7. Afier joining of some new employees. out of which 20 are rural, the ratio becomes 5 : 4. The number of new urban employees is:

(1) 100 (2) 85

(3) 76 (4) 108

3. A scored 73, 76, 20, and 7 runs in four out of five innings. What should be his score in the fifth innings, if he has to make an average of 55 runs in five innings?

(1) 99 (2) 11

(3) 55 (4) 42

4. ₹4,06,736 is divided among A, B and C such that the ratio between A and B is 2 : 3 and B and C is 1 : 2. The share of C is:

(1) ₹73,952 (2) ₹1,10,928

(3) ₹2,64,796 (4) ₹2,21,856

5. If $x+\frac{1}{x}=2\sqrt{3}$, then $x^2+\frac{1}{x^2}$ is equal to:

(1) 8 (2) 16

(3) 10 (4) 12

6. The distance between two cities is covered in $3\frac{1}{4}$ hours at a speed of 52 km/h. If the speed is increased to 65 km/h. how much time would be saved?

(1) 39 minutes (2) 45 minutes

(3) 40 minutes (4) 42 minutes

7. The product of two numbers is 45360; if the HCF of the numbers is 36, then their LCM is:

(1) 252 (2) 630

(3) 126 (4) 1260

8. ₹2,40,000 is taken as loan for three years compounded annually at 12.5% p.a. At the end of first year. the interest is revised to 12% p.a. The total amount to be repaid at the end of third year is:

(1) ₹3,26,400 (2) ₹3,34,800

(3) ₹3,38,688 (4) ₹3,42,648

9. ABCD is a cyclic quadrilateral such that is a diameter of the circle circumscribing it and angle ADC = 125°. Then angle BAC is equal to:

(1) 20° (2) 30°

(3) 60° (4) 35°

10. How many soap cakes of size 8 cm × 4.5 cm × 2 cm can be kept in a carton of size 11 m × 0.82 m × 0.63

(1) 81052 (2) 75626

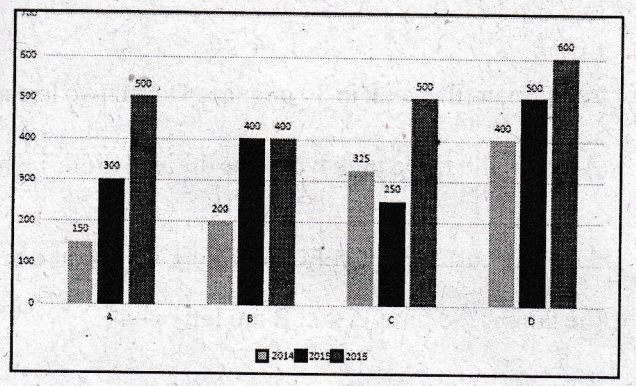
(3) 73498 (4) 78925

11. 8% of 5 litres is:

(1) 0.4 ml (2) 400 ml

(3) 40 ml (4) 4 ml

12. The given bar chart shows production of steel by companies A, B, C and D for years 2014, 2015, 2016 (in tonnes).



In the given bar-chart, the average production of steel at 'C' for the year 2014-2016 is:

(1) 358.33 (2) 333.33
(3) 423.58 (4) 400

13. If the height of an equilateral triangle is $10\sqrt{3}$ cm, the area is:

(1) $124\sqrt{3}$ cm² (2) $75\sqrt{3}$ cm²
(3) $80\sqrt{3}$ cm² (4) $100\sqrt{3}$ cm²

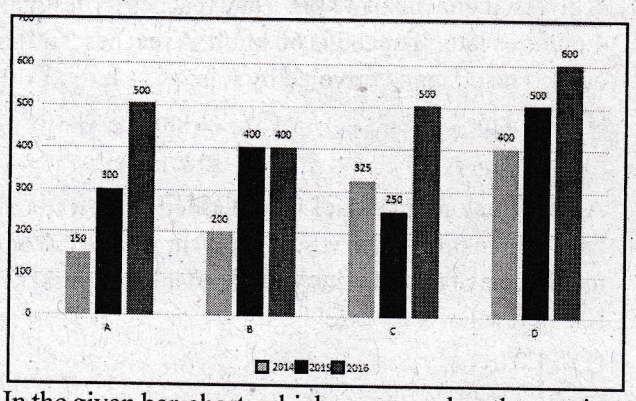
14. PA and PB are two tangents to a circle with centre O, from a point P outside the circle. A and B are points on the circle. If $\angle PAB = 86°$, then $\angle OAB$ is equal to:

(1) 43° (2) 45°
(3) 50° (4) 20°

15. Which of the following solids has least number of faces?

(1) Cube (2) Cone
(3) Triangular prism (4) Square pyramid

16. The given bar chart shows production of steel by companies A, B, C and D for years 2014, 2015, 2016 (in tonnes).

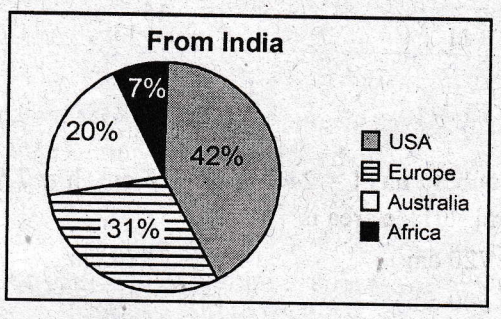


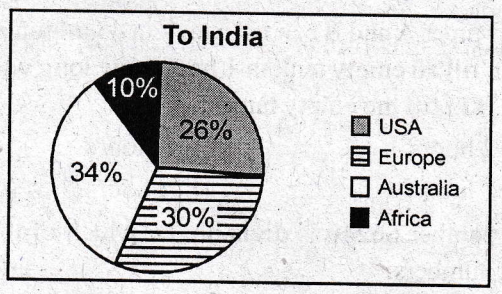
In the given bar-chart, which company has the maximum total production of steel?

(1) C (2) D
(3) A (4) B

Instructions

The given pie-chart shows the numbers of tourists for the year 2015, traveling from India and to India.





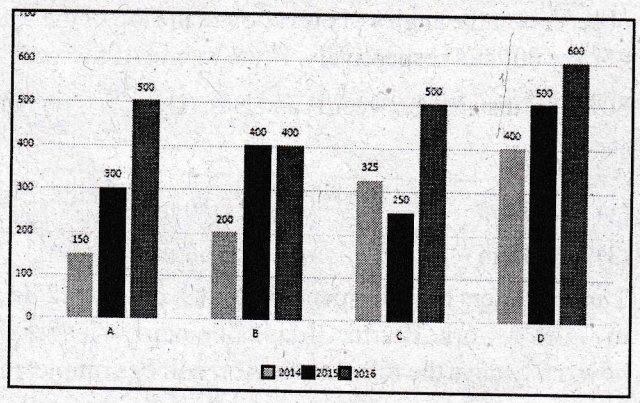
17. In the given pie-chart, if 1657850 is the total number of tourists visiting India, how many visited from Australia:

(1) 563669 (2) 589320
(3) 457602 (4) 331570

18. In the given pie-chart. from which country tourists have come to India more than Indians going to that country:

(1) Australia and Africa
(2) Europe
(3) USA
(4) Australia only

19. The given bar chart shows production of steel by companies A. B, C and D for years 2014, 2015, 2016 (in tonnes).



In the given bar-chart, what is the percentage production of 'B' in 2014 to the total production of 2014?

(1) 19.4% (2) 20%
(3) 27.6% (4) 18.6%

20. The price of petrol was raised by 15%. By how much percentage should a motorist reduce the consumption of petrol so that the expenditure on it does not increase?

(1) $9\frac{2}{11}\%$ (2) $15\frac{3}{13}\%$

(3) $13\frac{1}{23}\%$ (4) $6\frac{7}{8}\%$

21. If a cuboid has l = 24 cm, b = 16 cm. h = 7.5 cm, its lateral surface area is:

(1) 720 cm^2 (2) 2880 cm^2

(3) 600 cm^2 (4) 1440 cm^2

22. TWO pipes A and B can fill a tank in 45 minutes. If pipe A can fill an empty tank in 1 hour, how long will it take pipe B to fill the empty tank?

(1) 2 hours (2) 3 hours

(3) 1 hour (4) 4 hours

23. The number 66249 is divisible by which of the single digit numbers:

(1) Only by 3 and 9 (2) Only by 3 and 7

(3) Only by 9 (4) Only by 3

24. The marked price of a dress is ₹2,340 which is 25% above the cost price. If the dress is sold at a profit of 10%. the profit earned on the dress is:

(1) ₹234 (2) ₹187.20

(3) ₹197 (4) ₹175.50

25. If $x = a\cos\theta + b\sin\theta$ and $y = a\sin\theta - b\cos\theta$, the value of $x^2 + y^2$ is:

(1) $a^2 - b^2$ (2) $a - b$

(3) $a^2 + b^2$ (4) $a + b$

26. A and B are standing on the same side of a wall and observe that the angles of elevation to the top of the wall 45° are 60° and respectively. If the height of the wall is 50 M. the distance between A and B is: (Use $\sqrt{3} = 1.73$ and $\sqrt{2} = 1.41$)

(1) 25.07 m (2) 21.10 m

(3) 17.38 m (4) 14.65 m

27. Three painters have to spend 6 hours a day for 12 days to finish a work. If after 3 days one painter leaves, in how many days the remaining work will be completed?

(1) $15\frac{2}{3}$ (2) $13\frac{1}{2}$

(3) 11 (4) 8

28. The value of $4\sin^2 30° + 3\cot^2 + 60°$ is:

(1) 1 (2) $\frac{1}{\sqrt{3}}$

(3) 2 (4) 0

29. A pipe can fill a tank in 30 minutes. Due to two leakages A and B, the filled tank would be drained off in $1\frac{1}{2}$ hour and $1\frac{1}{4}$ hour respectively. How long will it take to fill the tank if the pipe, A and B are left open?

(1) $1\frac{7}{8}$ hour (2) $1\frac{1}{3}$ hour

(3) $1\frac{4}{5}$ hour (4) $1\frac{5}{6}$ hour

30. The table shows Income and expenditure of a person for 3 years (in thousands):

Statement of Income and Expenditure			
Year	Income	Expense	Savings
2000	110	103	+7
2001	223	214	+9
2002	243	197	+46
2003	189	232	-43

In the given table. if a person invested his savings every year at 8% simple interest, how much interest will he earn at the end of 2003?

(1) 7.46 (2) 6.80

(3) 4.96 (4) 5.52

31. A drives at the rate of 45 km/h and reaches its destination 4 minutes late. If speed is 60 km/h. A reaches 5 minutes early. The distance traveled by A is:

(1) 24 km (2) 21 km

(3) 27 km (4) 30 km

32. A tall rectangular vessel is half filled with water. The base dimension of the vessel is 62 cm x 45 cm. A heavy metal cube of edge 15 cm is dropped into the vessel. The rise in level of the vessel is:

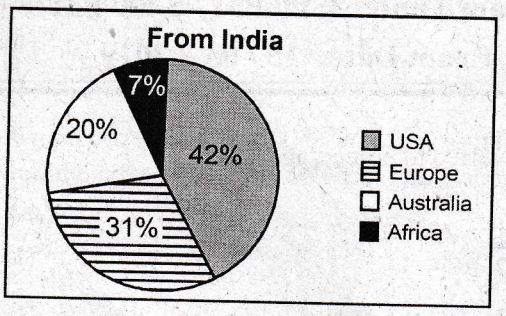
(1) 1.21 cm

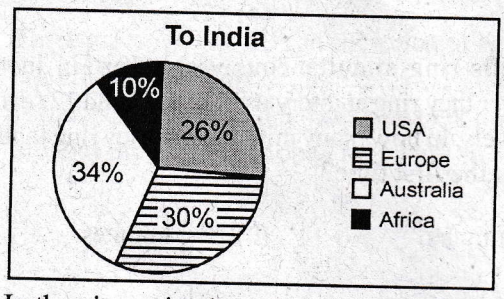
(2) 1.15 cm

(3) 1.07 cm

(4) 1 cm

33. The given pie-chart shows the numbers of tourists for the year 2015. traveling from India and to India.





In the given pie-chart, if the number of tourists visiting India is 21,35,600 and the number from India to other countries is 20,45,450, how many more people visited USA from India than from USA to India?

(1) 303833 (2) 358097
(3) 342675 (4) 287698

34. A bought 600 gm, 750 gm, 1.1 kg, 2.3 kg and 800 gm packs of dal from a shop. What is the average weight of the packs?

(1) 11.1 kg (2) 111 gm
(3) 1.11 gm (4) 1.11 kg

35. A trader gives a discount of 4% for purchases above ₹25,000, 6% for purchases above ₹35,000 and 8% for purchases above ₹50,000. If an item is purchased for ₹38,500. what would be the amount of discount?

(1) ₹3,740 (2) ₹1,810
(3) ₹3,080 (4) ₹2,310

36. If the height of a pole and the distance between the pole and a man standing nearby are equal, what would be the angle of elevation to the top of the pole?

(1) 60° (2) 90°
(3) 30° (4) 45°

37. $(-4) \times (-8) \div (-2) + 3 \times 5$ is equal to:

(1) –1 (2) 1
(3) 31 (4) –31

38. The table shows Income and expenditure of a person for 3 years (in thousands):

Statement of Income and Expenditure			
Year	Income	Expense	Savings
2000	110	103	+7
2001	223	214	+9
2002	243	197	+46
2003	189	232	-43

In the given table, what is the percentage of expenditure on income in the year 2002?(round off)

(1) 85% (2) 78%
(3) 82% (4) 81%

39. The dimensions of a swimming pool are 66 m × 35 m × 3 in. How many hours will it take to fill the pool by A pipe of diameter 35 cm with water flowing at speed 8 m/s?

(1) 2.75 (2) 3.5
(3) 2.5 (4) 3.2

40. The price of a refrigerator is ₹22,000. A shopkeeper marks its price 15% above its cost price and gives a discount of 8%. The discount is:

(1) ₹1,960 (2) ₹1,824
(3) ₹1,672 (4) ₹2,024

41. The least number that should be added to 10000 so that it is exactly divisible by 327 is:

(1) 327 (2) 237
(3) 137 (4) 190

42. A car consumes 5.4 litres of petrol to cover 60.48 km, how many kilometers be covered with 22 litres of petrol?

(1) 246.4 (2) 238.62
(3) 240.24 (4) 243.5

43. $(2x-1)^3 + (3x-4^3) + (x-7)^3 = (6x-3)(3x-3)(x-7)$, then what is the value of x?

(1) 5 (2) 8
(3) 2 (4) 3

44. The table shows Income and expenditure of a person for 3 years (in thousands):

Statement of Income and Expenditure			
Year	Income	Expense	Savings
2000	110	103	+7
2001	223	214	+9
2002	243	197	+46
2003	189	232	-43

In the given table, if a person reduced his expenditure by 10%, by how much would his total savings increased?

(1) 69.8 (2) 83
(3) 74.6 (4) 78.2

45. The greatest number of four digits which is exactly divisible by 24, 36 and 54 is:

(1) 9990 (2) 9924

(3) 9936 (4) 9960

46. The simple interest on a certain sum at 15% p.a. for three years is ₹7,200. The sum is:

(1) ₹16,000 (2) ₹24,000

(3) ₹32,000 (4) ₹48,000

47. If $a^3 + b^3 = 416$ and $a + b = 16$, then $(a - b)^2 + ab$ is equal to:

(1) 32 (2) 22

(3) 24 (4) 26

48. The cube root of 3375 equal to.

(1) 35 (2) 25

(3) 55 (4) 15

49. A marketing agent earns a commission of 2% on first ₹2,00,000. 1.5% on next ₹2,00,000 and 1% on the remaining amount of sales made in a month, Ifthe sales achieved by the agent for the month of April 2018 are ₹5,68,000, the commission earned is:

(1) ₹8,680 (2) ₹7,730

(3) ₹8,240 (4) ₹7,105

50. $\frac{3}{4}+\frac{5}{2}\left[\frac{1}{4}\times\left(\frac{8}{5}-\frac{4}{3}\right)\right]$ is equal to:

(1) $\frac{13}{24}$ (2) $\frac{3}{4}$

(3) $\frac{1}{4}$ (4) $\frac{11}{12}$

Answers

1. (2)	2. (2)	3. (1)	4. (4)	5. (3)
6. (1)	7. (4)	8. (3)	9. (4)	10. (4)
11. (2)	12. (1)	13. (4)	14. (1)	15. (2)
16. (2)	17. (1)	18. (1)	19. (4)	20. (3)
21. (3)	22. (2)	23. (1)	24. (2)	25. (3)
26. (2)	27. (2)	28. (3)	29. (1)	30. (2)
31. (3)	32. (1)	33. (1)	34. (4)	35. (4)
36. (4)	37. (1)	38. (4)	39. (3)	40. (4)
41. (3)	42. (1)	43. (3)	44. (3)	45. (3)
46. (1)	47. (4)	48. (4)	49. (1)	50. (4)

8. SSC CPO SI EXAM PAPER-2018

Exam Time: 3: 00 PM - 5 :00 PM

Exam Date: 15 / 03 / 2019

1. $\frac{9}{40}$ converted to percentage is:

(1) $2\frac{1}{2}$ (2) 2

(3) 22 (4) $22\frac{1}{2}$

2. Four bells ring simultaneously at a certain instant. Thereafter they ring at intervals of 6, 8, 10 and 12 seconds respectively. In how many minutes will they ring together again for the first time?

(1) 2 minutes (2) $2\frac{1}{4}$ minutes

(3) 1 minute (4) $1\frac{1}{2}$ minutes

3. The number 106974 is divisible by which of the single digit numbers:

(1) 2, 3, 6 and 7 only (2) 2, 3 and 7 only

(3) 2, 3 and 4 only (4) 2 and 3 only

4. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle ADC = 148°. Then angle BAC is equal to:

(1) 60° (2) 58°

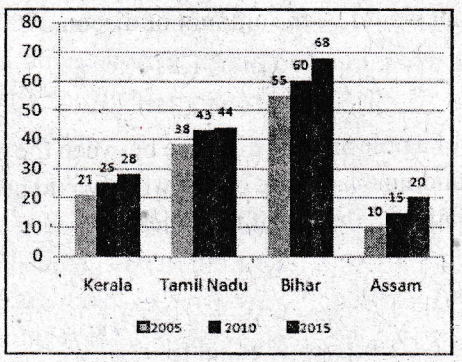
(3) 40° (4) 150°

5. The face value of the digit 6 in 16008 is:

(1) 6 (2) 600

(3) 6000 (4) 60

6. The given bar chart shows population of 4 different states in 3 years (in crores).



In the given bar-chart, what is the ratio of increase in population in Bihar between 2005 and 2010 to that between 2010 and 2015?

(1) 3 : 7 (2) 7 : 3

(3) 5 : 8 (4) 8 : 5

7. $\frac{\operatorname{cosec} 31^\circ}{\sec 59^\circ}$ is equal to:

(1) 1 (2) 3

(3) 0 (4) 2

8. A man covers the first 210 km of a journey at 60 km/h and the next 198 km at 66 mm. The average speed for the whole journey is:

(1) 64 km/h (2) 63 km/h

(3) 62.8 km/h (4) 68.5 km/h

9. Three pipes A, B and C can fill a cistern in 15, 24 and 36 minutes respectively. If pipe D can drain a full tank in 1hour. how long will it take for the tank to be filled if all the four pipes are kept open together?

(1) $9\frac{1}{8}$ hours (2) $5\frac{12}{25}$ hours

(3) $7\frac{2}{3}$ hours (4) $8\frac{16}{13}$ hours

10. From the top of a hill 96 m high. the angles of depression of two cars parked on the same side of the hill (at same level as the base of the hill) are 30° and 60° respectively. The distance between the cars is: (use $\sqrt{3} = 1.73$ and round off to nearest whole number.)

(1) 165 m (2) 111 m

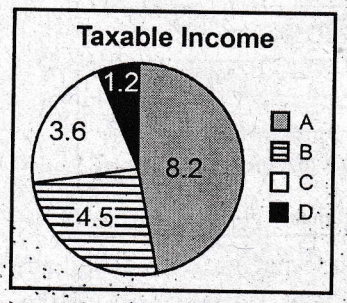
(3) 220 m (4) 243 m

11. The sum of three numbers is 777. The ratio between the first two numbers is 7: 9 and the ratio between the second and third number is 3 :7. The second number is:

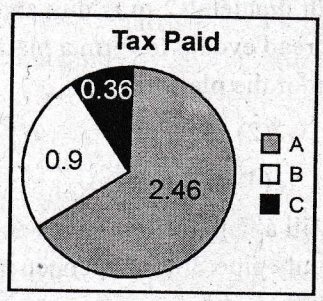
(1) 252 (2) 63

(3) 189 (4) 147

12. The given pie-chart shows the taxable income for A, B, C and D in lakhs of rupees.



This chart shows the tax paid for the above taxable income by A, B, C and D in lakhs of rupees.



In the given pie-chart, what is the percentage of tax charged for A?

(1) 30% (2) 15%

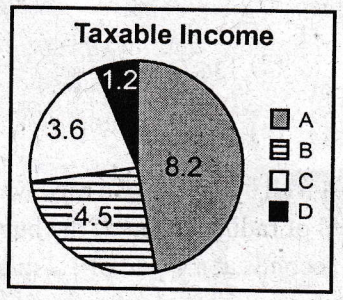
(3) 40% (4) 20%

13. Two numbers are in the ratio 4 : 9. If both the numbers are increased by 12, the ratio becomes 11 : 21. The sum of the original numbers is:

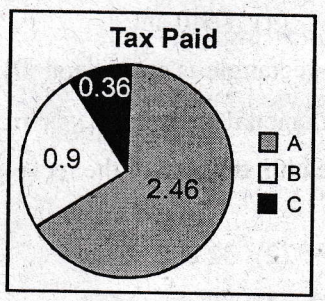
(1) 128 (2) 64

(3) 52 (4) 104

14. The given pie-chart shows the taxable income for A, B, C and D in lakhs of rupees.



This chart shows the tax paid for the above taxable income by A, B, C and D in lakhs of rupees.



In the given pie-chart. if B's taxable income was 12% more. how much tax would he have paid then?

(1) 0.9 (2) 10.8

(3) 1.08 (4) 0.108

15. If $(x-6)^3 + (x-4)^3 + (x-5^x)^3 = (3x-15)(x-4)(x-6)$, then what is the value of x?

(1) 3 (2) 7

(3) 18 (4) 5

16. An 18 m deep well with diameter 7 m is dug and the earth from digging is spread evenly to form a platform 18 m × 14 m. The height of the platform is:

(1) 2.6 m (2) 3.05 m

(3) 2.75 m (4) 3.2 m

17. Two pipes A and B can fill a tank in 20 minutes and 30 minutes respectively. If only pipe B was kept open in the beginning for $\frac{1}{5}$th of the total time and then. both pipe A and B were kept open for the remaining time. How many minutes did it take the pipes to fill the tank?

(1) $13\frac{5}{23}$ (2) $16\frac{5}{23}$

(3) $16\frac{1}{23}$ (4) $13\frac{1}{23}$

18. If the area of a regular hexagon is $108\sqrt{3}$ cm², its perimeter is:

(1) 24 cm (2) $36\sqrt{2}$ cm

(3) $28\sqrt{3}$ cm (4) $43\sqrt{3}$ cm

19. A bucket is drawn from a well by means of a rope which is wound around a wheel of radius 48 cm. If the bucket ascends in 1 minute 12 seconds at a speed of 1.2 m/sec. find the length of the rope.

(1) 8.64 cm (2) 86.4 cm

(3) 864 cm (4) 8640 cm

20. A paper in the form of a rectangle is cut diagonally to form two triangles. If the diagonal measures $4\sqrt{5}$ cm and the length is twice the breadth, the area of the rectangle is:

(1) 54 cm² (2) 32 cm²

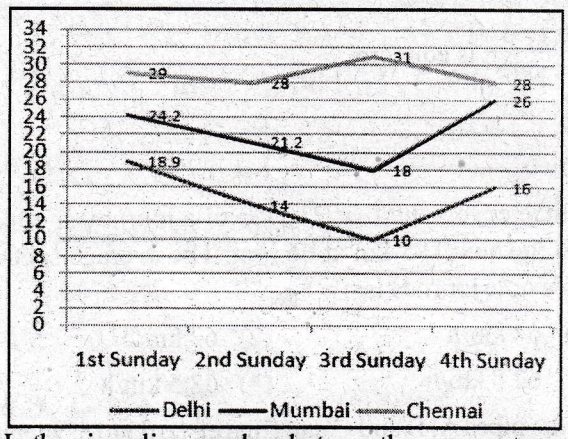
(3) 72 cm² (4) 80 cm²

21. If $x+\frac{1}{x}=3\sqrt{2}$, then $x^2+\frac{1}{x^2}$ is equal to:

(1) 22 (2) 16

(3) 26 (4) 14

22. The line graph shows the temperature on four Sundays of three cities.



In the given line graph. what was the average temperature on the 1st Sunday in all the three cities? (rounded to first decimal)

(1) 21.2 (2) 25.4

(3) 23 (4) 24

23. A dealer allows a discount of 12% on the marked price. If the selling price is ₹924, the discount is:

(1) ₹126 (2) ₹110.90

(3) ₹114 (4) ₹119.20

24. What is the angle of elevation of the sun from the top of a vertical pole when its height is equal to the length of its shadow?

(1) 90° (2) 60°

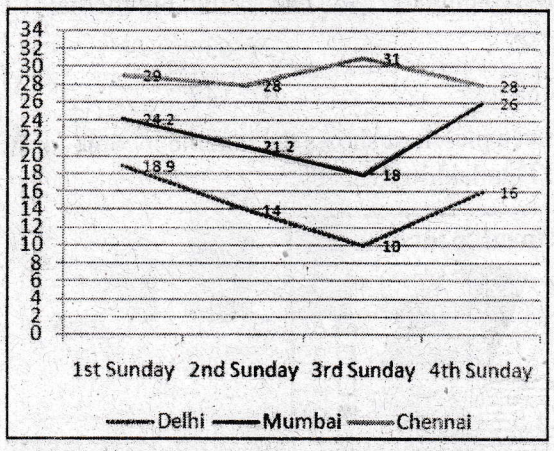
(3) 45° (4) 30°

25. PA and PB are two tangents to a circle with centre O, from a point P outside the circle. A and B are points on the circle. If ∠APB =100°, then ∠OAB is equal to:

(1) 25° (2) 20°

(3) 35° (4) 50°

26. The line graph shows the temperature on four Sundays of three cities.



In the given line graph. what was the difference in temperature between Delhi and Chennai on the 3rd Sunday?

(1) 21 (2) 8

(3) 17 (4) 13

27. Find the compound interest at the rate of 7% pa compounded annually for two years on the principal that yields a simple interest of ₹9450 for 3 years at 7% pa.

(1) ₹12,678.40 (2) ₹6,520.50
(3) ₹12,345.20 (4) ₹10,127

28. What is 34% of 1.2 km?

(1) 4,080 cm (2) 4,08,000 cm
(3) 408 cm (4) 40,800 cm

29. The selling price of an article is ₹2,28,528. A shopkeeper marks its price 15% above its cost price and gives a discount of 10%. The cost price is:

(1) ₹2,20,800 (2) ₹2,58,740
(3) ₹2,87,390 (4) ₹2,18,650

30. A can do $\frac{1}{5}$th of a work in 4 days and B can do $\frac{1}{6}$th of the same work in 5 days. In how many days they can finish the work, if they work together?

(1) 12 (2) 20
(3) 15 (4) 30

31. The compound interest calculated yearly on a certain sum of money for the second year is ₹1,320 and for the third year is ₹1,452. The principal amount at the start of the first year is:

(1) ₹13,200 (2) ₹12,970
(3) ₹12,650 (4) ₹12,000

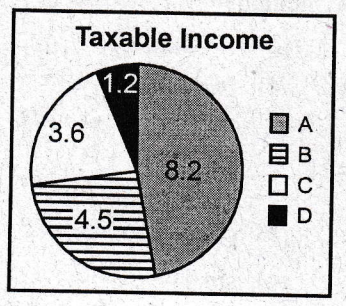
32. The greatest number of 5 digits that is exactly divisible by each of 8, 12, 15 and is:

(1) 99950 (2) 99940
(3) 99980 (4) 99960

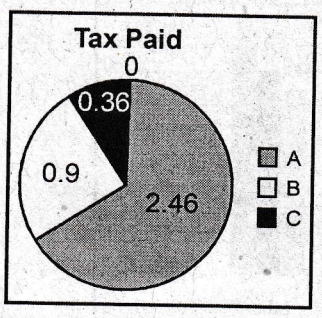
33. $13 \div \{4 \text{ of } 2 - 3 + 4 \times (6 - 4)\}$ is equal to:

(1) $-2\frac{1}{13}$ (2) 1
(3) 0 (4) 1.3

34. The given pie-chart shows the taxable income for A, B, C and D in lakhs of rupees.



This chart shows the tax paid for the above taxable income by A, B, C and D in lakhs of rupees.



In the given pie-chart. what is the overall tax percentage for all four?

(1) 17.2% (2) 15%
(3) 21.3% (4) 19.5%

35. If $a^3 - b^3 = 216$ and $a - b$, then $(a + b)^2 - ab$ is equal to:

(1) 42 (2) 36
(3) 38 (4) 52

36. The average weight of six children is 32.8 kg. If two more children weighing 26.5 kg and 28.3 kg are added to the group, what would be the new average weight in kilograms?

(1) 31.45 (2) 30.3
(3) 29.2 (4) 28.9

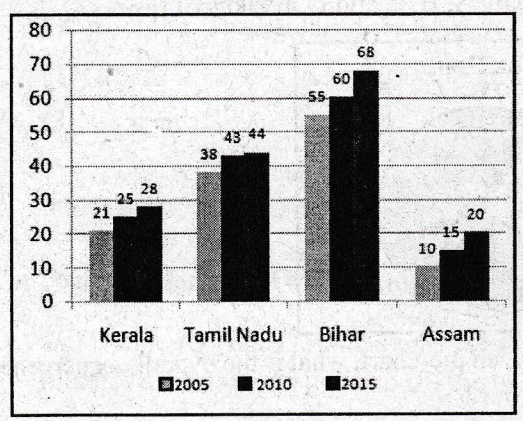
37. A and B can finish a work together in $3\frac{2}{3}$ days. C and D can finish the same work in $3\frac{1}{7}$ days. If A, B, C and 4 do the work together. how long will it take for them to finish half of the work?

(1) $1\frac{1}{13}$ days (2) $\frac{8}{13}$ days
(3) $\frac{2}{13}$ days (4) $\frac{11}{13}$ days

38. The area of a right angled triangle having base 24 cm and hypotenuse 25 cm is:

(1) 92 cm^2 (2) 72 cm^2
(3) 108 cm^2 (4) 84 cm^2

39. The given bar chart shows population of 4 different states in 3 years (in crores).



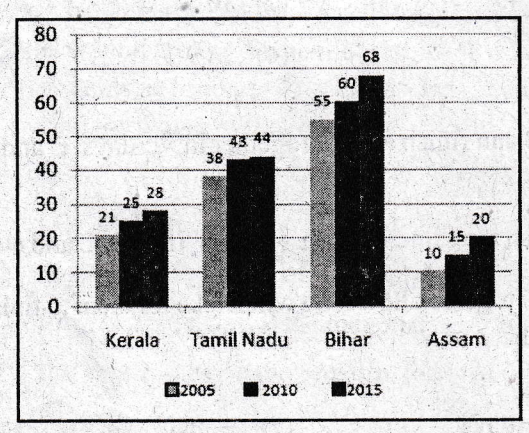
In the given bar-chart. which state has had the maximum population growth in 2015 compared to 2005.

(1) Assam (2) Tamil Nadu
(3) Bihar (4) Kerala

40. A 230 m long train has to cross a platform of length 750 m. If the train is running at a speed of 72 km/h. the time taken is:

(1) 49 seconds (2) 58 seconds
(3) 64 seconds (4) 72 seconds

41. The given bar chart shows population of 4 different states in 3 years (in crores).



In the given bar-chart, what is the population growth (in crores) in total in states Kerala and Tamil Nadu for the period between 2005 and 2015?

(1) 13 (2) 9
(3) 10 (4) 11

42. The ratio between a base angle and a vertical angle of an isosceles triangle (base angles being equal) is 2 : 5. The vertical angle is:

(1) 140° (2) 40°
(3) 100° (4) 80°

43. The length of the longest pole that can be placed in a room 16 m long, 8 m wide and 11 m high is:

(1) 20 m (2) 21 m
(3) 19 m (4) 18 m

44. If the selling price of an article is $1\frac{2}{5}$ of its cost price, the percentage gain is.

(1) 47 (2) 40
(3) 20 (4) 25

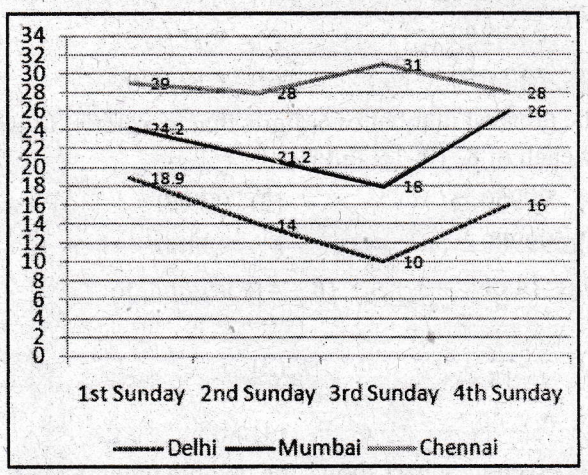
45. The smallest number that should be added to 8212 to obtain a perfect square is:

(1) 123 (2) 69
(3) 54 (4) 112

46. Salary of A increased by 8% in the year 2015 as compared to 2014 and decreased by 6% in the year 2016 as compared to 2015. If his salary was ₹2,34,778 in 2016, his salary (round ofi to nearest whole number) in 2014 was:

(1) ₹2,31,263 (2) ₹2,34,987
(3) ₹2,38,347 (4) ₹2,36,402

47. The line graph shows the temperature on four Sundays of three cities.



In the given line graph, when was the maximum temperature recorded in Chennai?

(1) 4th Sunday (2) 1st Sunday
(3) 3rd Sunday (4) 2nd Sunday

48. $1+\frac{\tan^2 A}{1+\sec A}$ is equal to:

(1) SecA (2) CosecA
(3) cosA (4) sinA

49. A square piece of cardboard with side 12 cm has a small square of 2 cm cut out from each of the corners. The resulting flaps are turned up to make a box 2 cm deep. The volume of the box is:

(1) 94 cm (2) 102 cm^3

(3) 128 cm^3 (4) 112 cm^3

50. $10 - \{72 - 12 \div (59 + 9 \times 2)\}$ is equal to:

(1) –5 (2) 7

(3) 5 (4) –7

Answers

1. (4)	2. (1)	3. (1)	4. (2)	5. (1)
6. (3)	7. (1)	8. (3)	9. (4)	10. (2)
11. (3)	12. (1)	13. (4)	14. (3)	15. (4)
16. (3)	17. (4)	18. (2)	19. (4)	20. (2)
21. (2)	22. (4)	23. (2)	24. (3)	25. (4)
26. (1)	27. (2)	28. (4)	29. (1)	30. (1)
31. (4)	32. (4)	33. (2)	34. (3)	35. (2)
36. (1)	37. (4)	38. (4)	39. (1)	40. (1)
41. (1)	42. (3)	43. (2)	44. (2)	45. (2)
46. (1)	47. (3)	48. (1)	49. (3)	50. (1)

9. SSC CPO SI EXAM PAPER-2018

Exam Time: 9:00AM - 11:00 PM

Exam Date: 16/03 / 2019

1. A square cardboard with side 3 m is folded through one of its diagonal to make a triangle. The height of the triangle is:

(1) $\frac{3}{\sqrt{2}}$ m (2) $2\sqrt{3}$ m

(3) $3\sqrt{2}$ m (4) $\frac{2}{\sqrt{3}}$ m

2. What percentage of ₹124 is ₹49.60?

(1) 250 (2) 16

(3) 123 (4) 40

3. $\sin 18° - \cos 72°$ is equal to:

(1) $\frac{1}{2}$ (2) 0

(3) 2 (4) 1

4. The surface area of a cube is 1176 cm^2. Its volume is:

(1) 3486 cm^3 (2) 3206 cm^3

(3) 2744 cm^3 (4) 3964 cm^3

5. A boy is standing near a pole which is 2.7 m high and the angle of elevation is 30". The distance of the boy from the pole is $(\sqrt{3} = 1.73)$:

(1) 4.68 m (2) 4.63 m

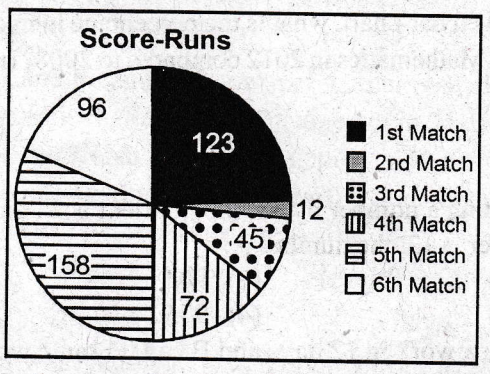
(3) 4.53 m (4) 4.42 m

6. Find the inner surface area of four walls of a rectangular room with length 7 m breadth 5 m and height 3.5 m

(1) 168 m^2 (2) 84 m^2

(3) 126 m^2 (4) 42 m^2

7. The given pie-chart shows runs scored by A in 6 matches.

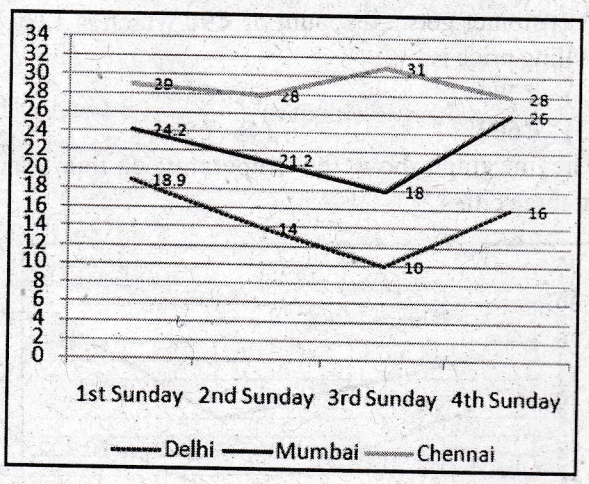


In the given pie-chart. if A scored a century in matches 4 and 6, What would have been her average score?

(1) 89.7 (2) 93.4

(3) 91.2 (4) 84.5

8. The line graph shows the temperature on four Sundays of three cities.

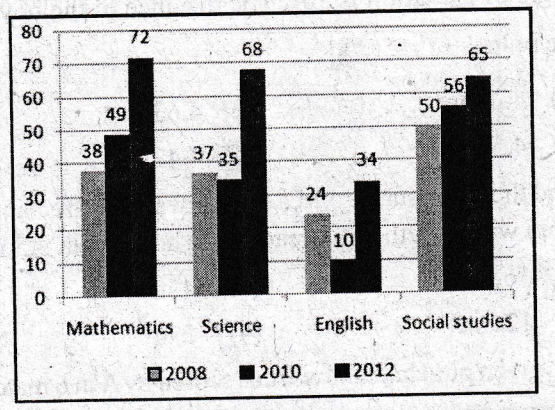


In the given line graph, what was the difference in temperature between Delhi and Mumbai on the 2nd Sunday?

(1) 13 (2) 17.2

(3) 7.2 (4) 21

9. The given bar chart shows number of marks scored by a student in each subject in three years:



In the given bar-chart. what is the percentage increase in marks in Mathematics in 2012 compared to 2008? (round off)

(1) 89 (2) 100
(3) 95 (4) 92

10. On dividing a number by 38, the quotient is 24 and the remainder is 13, the number is:

(1) 956 (2) 904
(3) 925 (4) 975

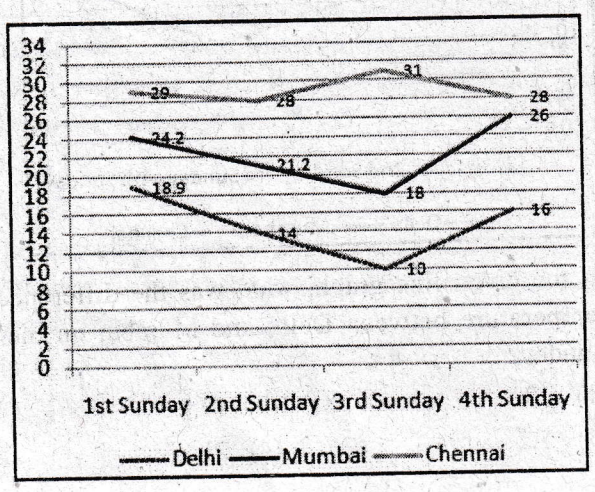
11. A can do a work in 12 days and B can do same work in 18 days. After 5 days of working together, how much work will be left?

(1) $\frac{7}{25}$ (2) $\frac{11}{36}$
(3) $\frac{5}{13}$ (4) $\frac{5}{12}$

12. A customer gets a discount of ₹90 which is 12%. The selling price is:

(1) ₹770 (2) ₹540
(3) ₹660 (4) ₹580

13. The line graph shows the temperature on four Sundays of three cities.



In the given line graph, when was the maximum temperature recorded in Delhi?

(1) 1st Sunday (2) 2nd Sunday
(3) 4th Sunday (4) 3rd Sunday

14. If $a^3 - b^3 = 208$ and $a - b$, then $(a + b)^2 - ab$ is equal to:

(1) 42 (2) 38
(3) 52 (4) 26

15. The base of an isosceles triangle is 6 cm and its perimeter is 16 cm. Its area is:

(1) 11 cm^2 (2) 12 cm^2
(3) 9 cm^2 (4) 10 cm^2

16. If the compound interest at rate of 10% p.a compounded half-yearly for $1\frac{1}{2}$ years is ₹2,522. The principal amount is:

(1) ₹16,000 (2) ₹15,400
(3) ₹18,500 (4) ₹20,000

17. $\frac{14-6\times2}{15\div3+3}$ is equal to:

(1) $\frac{1}{4}$ (2) 2
(3) $\frac{4}{5}$ (4) $6\frac{2}{5}$

18. At a certain time of a day a tree 5.4 m height casts a shadow of 9 m. If a pole casts a shadow of 13.5 m at the same time, the height of the pole is:

(1) 6.3 m (2) 9.9 m
(3) 7.2 m (4) 8.1 m

19. Three partners A, B and C, share profits and losses in the ratio of 3 : 4 : 7. If the profit for the year before charging 30% tax is ₹1,10,166 what is B's share of profit afier tax?

(1) ₹22,033.20 (2) ₹24,673.10
(3) ₹31,476 (4) ₹9,442.80

20. The shadow of a tower. when the angle of elevation of the sun is is found to be 15 in shorter than when it is 45°. The height of the tower is:

(1) 26.5 m (2) 35.5 m
(3) 41.5 m (4) 20.5 m

21. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle ADC = 142°. Then angle BAC is equal to:

(1) 60° (2) 40°
(3) 52° (4) 50°

22. One tap can fill a tank in 3 hours and a leak can empty the tank in 5 hours. If the tap and the leak (which was half closed) were left open. how long will it take for the tank to fill?

(1) $4\frac{2}{7}$ hours (2) $7\frac{1}{2}$ hours

(3) $5\frac{1}{3}$ hours (4) $6\frac{2}{3}$ hours

23. $\frac{64}{25}$ converted to percentage is:

(1) 25.6 (2) 256

(3) 0.256 (4) 2.56

24. Pipe A can fill a cistern in 4 hours and another pipe B is installed. Both the pipes together fill the cistern in $2\frac{1}{2}$ hours. How long will it take for B alone to fill the cistern?

(1) $6\frac{2}{3}$ hours (2) 5 hours

(3) $5\frac{1}{6}$ hours (4) $6\frac{3}{8}$ hours

25. If the cost price of 4 chairs is equal to selling price of 3 chairs, then the profit or loss percentage is:

(1) $6\frac{2}{3}$ hours (2) 20%

(3) $16\frac{2}{3}$ % (4) 25%

26. A, B and C start walking together from a point. Their steps measure 42 cm, 56 cm and 64 cm respectively. What is the minimum distance they should walk so that each takes exact number of steps?

(1) 13.44 m (2) 14.06 m

(3) 14.58 m (4) 15.60 m

27. The students of a class donated ₹3,481 towards relief fund. Each student donated an amount equal to the number of students in the class. The number of students in the class is:

(1) 49 (2) 59

(3) 61 (4) 51

28. The average of all prime numbers between 21 and 50 is(round off to one decimal number):

(1) 32.9 (2) 35.9

(3) 33.7 (4) 34.8

29. The area of a parallelogram is 338 m^2. If its altitude is twice the corresponding base, its base is:

(1) 13 (2) 14

(3) 28 (4) 26

30. A bougt 38 kg rice @ ₹54.50/kg, 45 kg rice @ ₹62/kg and 55 kg rice @ ₹48/kg. He sold the mixture @ ₹65/kg. His profit or loss percentage is:

(1) Loss 1.04 (2) Profit 16.8

(3) Loss 1.7 (4) Profit 19.6

31. The product of HCF and LCM of two numbers is 3321. If one of the numbers is 369, the HCF of the numbers is:

(1) 3 (2) 21

(3) 9 (4) 27

32. A and B can finish a work together in 30 days. B and C can finish the same work together in 24 days and A and C can finish the work together in 40 days. If all three work together, how long will it take them to complete the work?

(1) 15 days (2) 10 days

(3) 20 days (4) 5 days

33. In what time will a sum double itself at 8% p.a simple interest?

(1) 5 years (2) 6 years

(3) 8 years (4) 12.5 years

34. If $\sqrt{x}-\frac{1}{\sqrt{x}}=3\sqrt{2}$, then $x^2+\frac{1}{x^2}$ is equal to:

(1) 52 (2) 56

(3) 20 (4) 46

35. The number 45789 is divisible by which of the single digit numbers:

(1) Only by 9 (2) Only by 3 and 9

(3) Only by 3 (4) Only by 3 and 7

36. $(24 \div 6-2)+(3\times 2+4)$ is equal to:

(1) 24 (2) 16

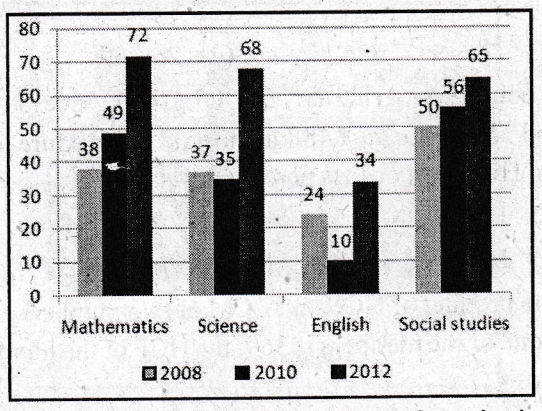
(3) 20 (4) 12

37. If $5\cos\theta-12\sin\theta=0$, the value of $\frac{2\sin\theta+\cos\theta}{\cos\theta-\sin\theta}$ is:

(1) $1\frac{75}{119}$ (2) $3\frac{1}{7}$

(3) $2\frac{34}{35}$ (4) $3\frac{2}{3}$

38. The given bar chart shows number of marks scored by a strident in each subject in three years:



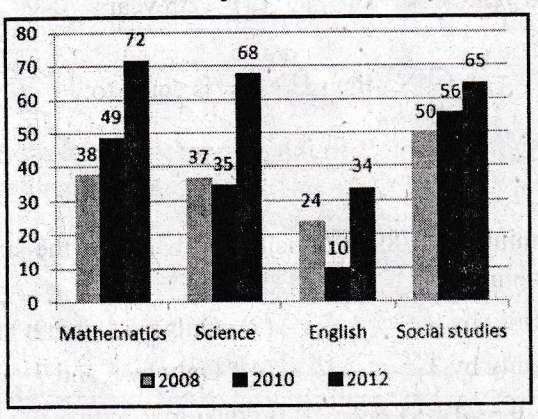
In the given bar-chart, if number of marks in Social Studies in year 2012 is 13% of the school strength, the number of students is:

(1) 400 (2) 540
(3) 500 (4) 580

39. PA and PB are two tangents to a circle with centre O, from a point P outside the circle. A and B are points on the circle. If $\angle OAB = 35°$, then $\angle APB$ is equal to:

(1) 35 (2) 70
(3) 25 (4) 20

40. The given bar chart shows number of marks scored by a student in each subject in three years:



In the given bar-chart, in which subject was the lowest marks scored in 2010?

(1) Social studies (2) Mathematics
(3) English (4) Science

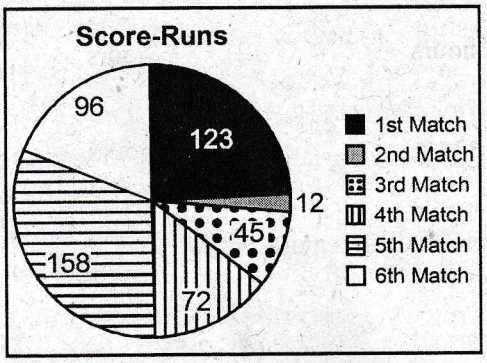
41. A train travels at a speed of 76 km/h. If it crosses a pole in 36 seconds. the length of the train is:

(1) 720 m (2) 675 m
(3) 760 m (4) 630 m

42. A saves 12% of her income. If she spends ₹2,16,128, her total income is:

(1) ₹2,42,063 (2) ₹2,45,600
(3) ₹2,48,000 (4) ₹2,43,560

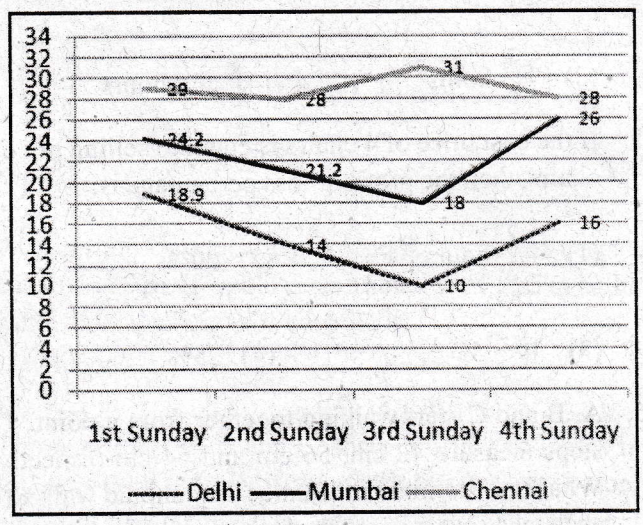
43. The given pie-chart shows runs scored by A in 6 matches.



In the given pie-chart, what is the increase or decrease in score in match 4 as compared to match 2?

(1) +27 (2) –27
(3) –60 (4) +60

44. The line graph shows the temperature on four Sundays of three cities.



In the given line graph, what was the average temperature on the 3rd Sunday in all the three cities? (rounded to first decimal)

(1) 24 (2) 23
(3) 19.7 (4) 25.4

45. If an airplane covers a distance of 980 km in 35 minutes, then what time it will take to cover a distance of 1470 km.

(1) $\frac{1}{2}$ hour (2) $1\frac{1}{8}$ hours
(3) $\frac{7}{8}$ hour (4) $1\frac{1}{6}$ hours

46. If $(2x-5)^3 + (x-2)^3 + (3x-9)^3 = (2x-5)(3x-9)(3x+6)$, then what is the value of x?

(1) 7 (2) 2

(3) 18 (4) 5

47. The average height of 12 students of a class is 132.5 cm. If one more strident joins. the average height becomes 131.2 cm. the height of the new student is:

(1) 112.7 cm (2) 122.3 cm

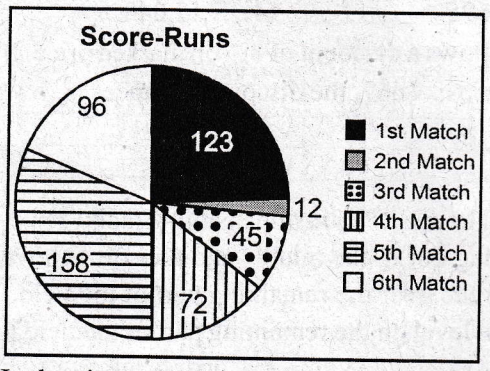
(3) 115.6 cm (4) 128.5 cm

48. The liquid in a container is sufficient to paint an area of 11.28 m^2. How many boxes of dimension 30 cm × 25 cm × 12 cm can be painted with the liquid in this container?

(1) 40 (2) 24

(3) 32 (4) 12

49. The given pie-chart shows runs scored by A in 6 matches.



In the given pie-chart. what is the average runs scored in all matches? (rounded off)

(1) 85 (2) 90

(3) 88 (4) 84

50. Find the weight of a solid cylinder of height 35 cm and radius 14 cm, if the material of the cylinder weighs 8 gm/cm^3.

(1) 172.48 kg (2) 160 kg

(3) 177.44 kg (4) 166 kg

Answers

1. (1)	2. (4)	3. (2)	4. (3)	5. (1)
6. (2)	7. (1)	8. (3)	9. (1)	10. (3)
11. (2)	12. (3)	13. (1)	14. (4)	15. (2)
16. (1)	17. (1)	18. (4)	19. (1)	20. (2)
21. (3)	22. (1)	23. (2)	24. (1)	25. (1)
26. (1)	27. (2)	28. (2)	29. (1)	30. (4)
31. (3)	32. (3)	33. (4)	34. (3)	35. (3)
36. (4)	37. (2)	38. (3)	39. (2)	40. (3)
41. (3)	42. (2)	43. (4)	44. (3)	45. (3)
46. (2)	47. (3)	48. (1)	49. (4)	50. (1)

10. SSC CPO SI EXAM PAPER-2018

Exam Time: 12:45 PM - 2:45 PM

Exam Date: 16/03 / 2019

1. If $x - \frac{1}{x} = 2\sqrt{2}$, then $x^2 + \frac{1}{x^2}$ is equal to:

(1) 16 (2) 12

(3) 11 (4) 10

2. 2.4 converted to percentage is.

(1) 0.24 (2) 24

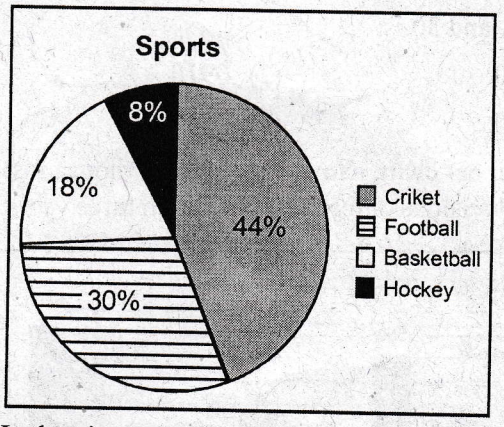
(3) 240 (4) 2.4

3. A can do a work in 30 days, B can do the same work in 48 days. After working alone for 20 days A left and B started working, how long will B take to complete the work?

(1) 24 days (2) 28 days

(3) 38 days (4) 16 days

4. The given pie-chart shows favourite sport of students of a school.



In the given pie-chart, if there were 1280 students in all, how many liked football?

(1) 102 (2) 550

(3) 230 (4) 384

5. The sides of a triangle are in the ratio 3 : 2 : 4 and the perimeter is 72 cm. The sides are:

(1) 24, 16, 32 (2) 48, 24, 12

(3) 36, 24, 12 (4) 36, 18, 9

6. What percent of 2.4 m is 3.2 cm?

(1) 75% (2) 7.5%

(3) $1000\frac{1}{3}\%$ (4) $13\frac{1}{3}\%$

7. A shopkeeper buys a book for ₹2,500 and marks its price at 15% above cost. He allows a discount of ₹345. The discount percentage is:

(1) 10 (2) 12

(3) 11 (4) 13

8. A sum at a Simple interest $\frac{7}{5}$ of 8% pa. becomes of itself in how many years?

(1) 5 (2) $2\frac{1}{2}$

(3) $3\frac{1}{2}$ (4) 2

9. PA and PB are two tangents to a circle with centre O, from a point P outside the circle. A and B are points on the circle. If $\angle OAB = 38°$, then $\angle APB$ is equal to:

(1) 25 (2) 35

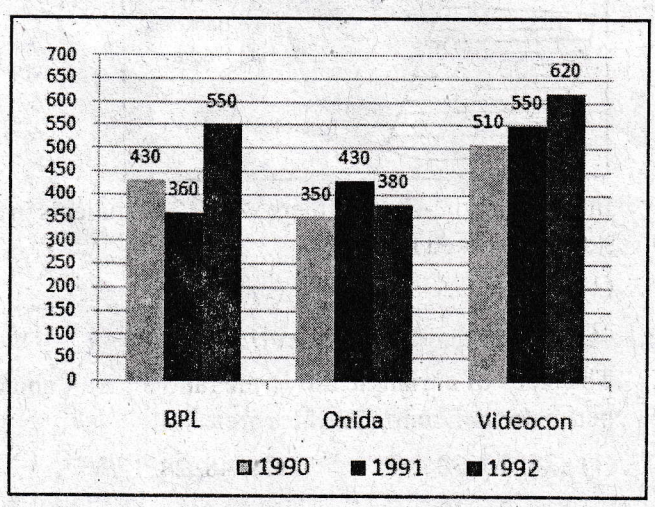
(3) 20 (4) 76

10. The largest number of four digits that is exactly divisible by 15, 21 and 30 is:

(1) 9840 (2) 9910

(3) 9830 (4) 9870

11. The given bar chart, shows the sales (in thousands) for sets of televisions of three companies in three years.



In the given bar-chart, What is a difference between the average sales of televisions A and B for 3 years?

(1) 78 (2) 56

(3) 104 (4) 60

12. Two pipes can fill a cistern in 72 and 90 minutes respectively. If both the pipes are left open how long will it take for the cistern to be half full?

(1) 40 minutes (2) 24 minutes

(3) 48 minutes (4) 20 minutes

13. A watch was sold at a profit of 10%. Had it been sold at ₹77 more the profit percent would have been 12%. The cost price of the watch is:

(1) ₹3,760 (2) ₹3,850

(3) ₹3,945 (4) ₹3,900

14. Find the cost of carpeting a room which is 11 m long and 6 m broad by a carpet which is 60 cm broad at the rate of ₹112.50 per meter.

(1) ₹12,375 (2) ₹13,280

(3) ₹11,695 (4) ₹12,040

15. A trader allows a discount of 8% on marked price. If the selling price is ₹667, the discount in rupees is:

(1) ₹47 (2) ₹54

(3) ₹58 (4) ₹43

16. A field is 119 m × 18 m in dimension. A tank 17 m × 6 m × 3 m is dug out in the middle and the soil removed is evenly spread over the remaining part of the field. The increase in level on the remaining part of the field is:

(1) 14 cm (2) 13 cm

(3) 15 cm (4) 12 cm

17. Divide ₹8,288 between A, B and C such that the proportion of their shares is 5 : 7 : 9. The share of C is:

(1) ₹2,032 (2) ₹3,552

(3) ₹3,872 (4) ₹2,612

18. If 15 men can do a piece of work in 14 days, how many men will be needed to do the work in 30 days?

(1) 8 (2) 10

(3) 7 (4) 9

19. The interest on ₹24,000 in 2 years compounded annually when the rates are 8% p.a and 10% p.a for two successive years is:

(1) ₹3,994 (2) ₹4,512

(3) ₹5,040 (4) ₹5,866

20. $15 - \{5 + 24 \div (3 \times 9 - 15)\}$ is equal to.

(1) –2 (2) $11\frac{1}{3}$

(3) $6\frac{1}{4}$ (4) 8

21. The angle of elevation of a flying drone from a point on the ground is 60°. After flying for 5 seconds the angle of elevation drops to 30°. If the drone is flying horizontally at a constant height of $1000\sqrt{3}$ m, the distance travelled by the drone is:

(1) 2000 m (2) 1000 m
(3) 3000 m (4) 4000 m

22. An oil merchant has 3 varieties of oil of volumes 432, 594 and 702 litres respectively. The number of cans of equal size that would be required to fill the oil separately is:

(1) 13, 15, 17 (2) 8, 11, 13
(3) 8, 13, 15 (4) 6, 9, 11

23. The table below shows the admission and transfer in standards 1-3 of a school.

	2015			2016	
std	Existing	Admission	Transfer	Admission	Transfer
1	232	12	8	23	36
2	241	6	11	15	10
3	248	16	13	21	24

In the given table, in Standard 1, how many students were there at the end of year 2016?

(1) 223 (2) 228
(3) 236 (4) 232

24. The average of squares of numbers 1 to 5 is:

(1) 11 (2) 5
(3) 8 (4) 9

25. 210102 can be divided exactly by:

(1) 7 (2) 3
(3) 4 (4) 8

26. A pipe can fill a tank in 4 hours and a leak at the bottom can empty that full tank in 6 hours. If after the tank is $\frac{1}{3}$ full, the leak is completely closed, how much time from beginning will it take for the tank to get filled completely?

(1) 12 hours (2) 4 hours
(3) 9 hours (4) $\frac{20}{3}$ hours

27. In an examination, Shreya score 84 out of 90 in Mathematics, 45 out of 50 in Science, 23 out of 25 in Computer Science and 68 out of 80 in English. In which subject did Shreya score the highest percentage?

(1) Mathematics (2) English
(3) Science (4) Computer Science

28. $(-4) \times (1020 \div 85 \times 3 - 22)$ is equal to.-

(1) –402 (2) –56
(3) 912 (4) 72

29. The value of $\cos^2 45° + \sin^2 30° - \sin^2 60°$ is equal to.

(1) $\frac{3}{2}$ (2) $\frac{1}{2}$
(3) 0 (4) 1

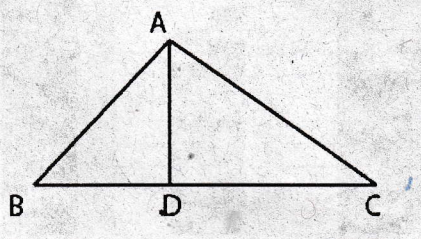
30. A, B and C are partners in a firm sharing profit in the ratio of 3 : 4 : 5. Ifthey set aside 4% ofthe profits as emergency find and shared the rest of the profit and B gets his share of profit as ₹1,81,400, the amount of profit set aside for emergency fund is:

(1) ₹27,845 (2) ₹18,140
(3) ₹22,675 (4) ₹24,500

31. If $(x-2)^3 + (x-3)^3 + (x-10)^3 = (x-2)(3x-30)$, then what is the value of x?

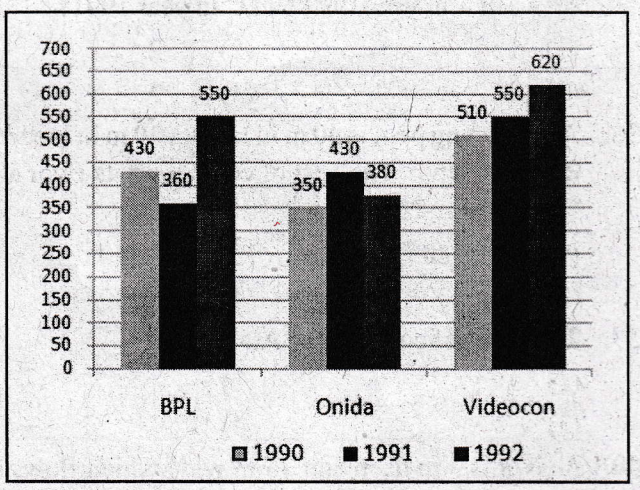
(1) 7 (2) 5
(3) 18 (4) 3

32. In the triangle given above $\angle ADB = 90°$, $\angle ABC = 45°$, AD = 10 cm, AC = 20 cm. The length of BC is :



(1) 10 cm (2) 27.32 cm
(3) 18.42 cm (4) 14.14 cm

33. The given bar chart, shows the sales (in thousands) for sets of televisions of three companies in three years.



In the given bar-chart, if profit earned per television by C in 1992 was ₹825, the total profit earned was:

(1) ₹51150 lakhs (2) ₹5115 lakhs
(3) ₹511.5 lakhs (4) ₹51.15 lakhs

34. A gardener planted 1936 saplings in a garden such that there were as many rows of saplings as the columns. The number of rows planted is:

(1) 46 (2) 44
(3) 48 (4) 42

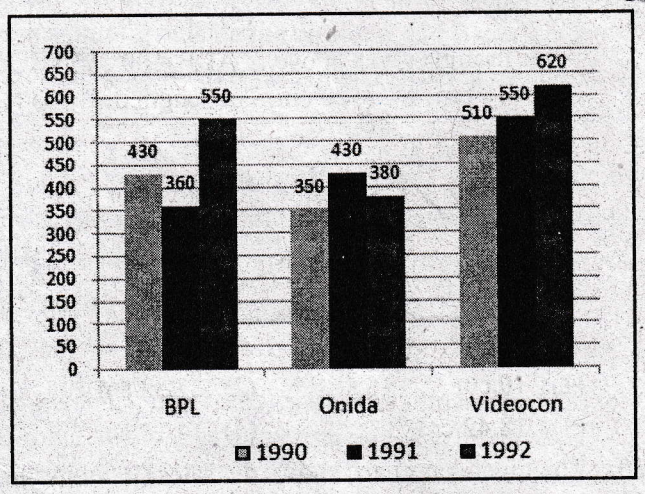
35. A boy walks 15 m in 7 seconds and then walks back in 5 seconds. His average speed (in m/s) is:

(1) 6 (2) 2.5
(3) 3.25 (4) 4

36. If and $a^3 + b^3 = 432$ and $a + b = 12$, then $(a + b)^2 - 3ab$ is equal to:

(1) 42 (2) 52
(3) 36 (4) 38

37. The given bar chart, shows the sales (in thousands) for sets of televisions of three companies in three years.



In the given bar-chart, what is the ratio of television sales between A in year 1992 and C in year 1991?

(1) 1 : 1 (2) 1 : 2
(3) 2 : 1 (4) 1 : 3

38. A swimming pool is 40 m in length, 30 m in breadth and 2.2 m in depth. The cost of cementing its floor and the four sides at ₹25/m² is:

(1) ₹43,980 (2) ₹37,540
(3) ₹34,260 (4) ₹37,700

39. The value of $\cot^2 A - \sin^2 A$ is equal to:

(1) 0 (2) –1
(3) –2 (4) 1

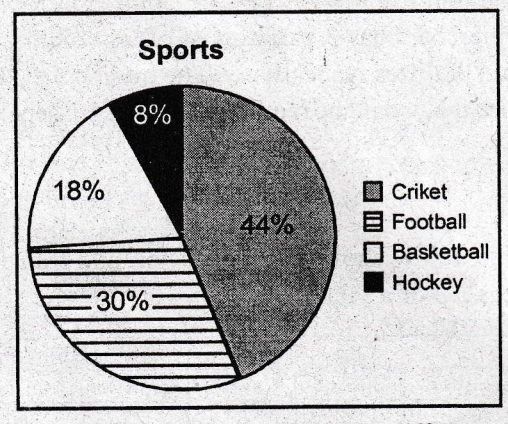
40. A river is 3 m deep and 36 m wide which flows at the rate of 5 km/h in to the sea. The volume of water that runs into the sea per minute is:

(1) 8300 m³ (2) 9000 m³
(3) 7600 m³ (4) 6400 m³

41. A part of the journey is covered in 31.5 minutes at 80 km/h and the remaining part in 16 minutes at 75 km/h. The total distance of the journey is:

(1) 45 km (2) 38 km
(3) 62 km (4) 54 km

42. The given pie-chart shows favourite sport of students of a school.



In the given pie-chart, what is the difference in percentage between liking for football and basketball?

(1) 10 (2) 8
(3) 13 (4) 12

43. A girl 1.2 m tall can just see the sun over a 3.62 m tall wall which is 2.42 m away from her. The angle of elevation of the sun is:

(1) 60° (2) 30°
(3) 90° (4) 45°

44. The table below shows the admissions and transfers in standards 1-3 of a school.

	2015			2016	
std	Existing	Admission	Transfer	Admission	Transfer
1	232	12	8	23	36
2	241	6	11	15	10
3	248	16	13	21	24

In the given table, what was the total strength in Standards 1-3 at the end of 2015?

(1) 723 (2) 721
(3) 710 (4) 704

45. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and angle ADC = 144°.

Then angle BAC is equal to: $\left(\pi = \frac{22}{7}\right)$

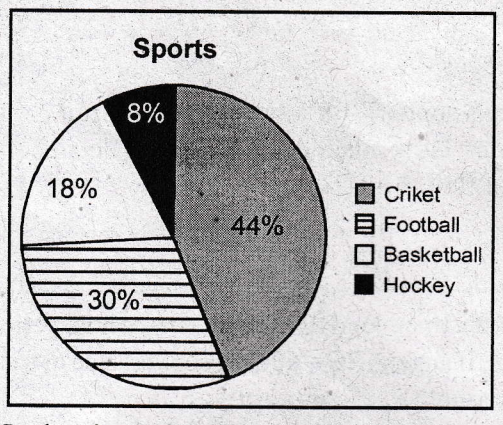
(1) 60° (2) 150°
(3) 54° (4) 40°

46. Which least number should be added to 1000 so that the number obtained is exactly divisible by 37?

(1) 1 (2) 25

(3) 36 (4) 13

47. The given pie-chart shows favourite sport of students of a school.



In the given pie-chart, if the school strength was 2500, how many liked cricket more than hockey?

(1) 1075 (2) 504

(3) 900 (4) 750

48. A rectangular solid is 20 cm long and 12 cm wide. If its volume is 2160 cm^2 the height is:

(1) 11 cm (2) 10 cm

(3) 12 cm (4) 9 cm

49. The table below shows the admission and transfer in standards 1-3 of a school.

	2015			2016	
std	Existing	Admission	Transfer	Admission	Transfer
1	232	12	8	23	36
2	241	6	11	15	10
3	248	16	13	21	24

In the given table, what was the difference between admission and transfer in standard 3 in year 2016?

(1) 3 (2) 9 cm3

(3) 8 (4) 5

50. A train 100 m long running at uniform speed crosses a station which is 500 m long in 25 seconds. How long will it take for the train to pass a station that is 380 m long?

(1) 21 seconds

(2) 20 seconds

(3) 19 seconds

(4) 22 seconds

Answers

1. (4)	2. (3)	3. (4)	4. (4)	5. (1)
6. (4)	7. (2)	8. (1)	9. (4)	10. (4)
11. (4)	12. (4)	13. (2)	14. (1)	15. (3)
16. (3)	17. (2)	18. (2)	19. (2)	20. (4)
21. (1)	22. (2)	23. (1)	24. (1)	25. (1)
26. (4)	27. (1)	28. (4)	29. (3)	30. (3)
31. (2)	32. (2)	33. (2)	34. (2)	35. (2)
36. (3)	37. (1)	38. (4)	39. (2)	40. (2)
41. (3)	42. (4)	43. (4)	44. (1)	45. (3)
46. (3)	47. (3)	48. (4)	49. (1)	50. (2)

11. SSC CPO SI EXAM PAPER-2018

Exam Time: 4:30 PM - 6:30 PM

Exam Date: 16/03 / 2019

1. $3 \times 7 + 4 - 6 \div 3 - 7 + 45 \div 5 \times 4 + 49$ is equal to:

(1) 99 (2) 101

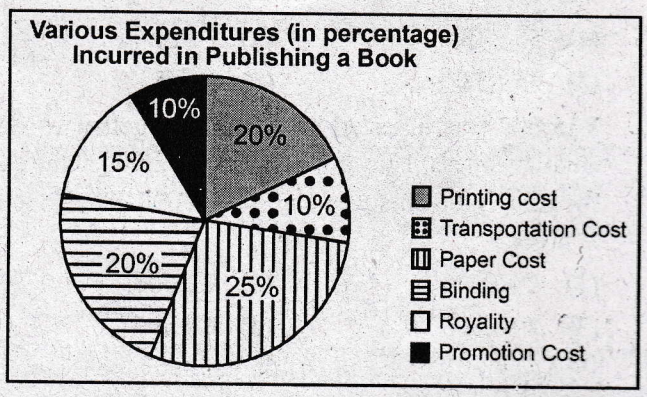
(3) 103 (4) 67

2. A steel vessel has a base of length 60 cm and breadth 30 cm. Water is poured in the vessel. A cubical steel box having edge of 30 cm is immersed completely in the vessel, By how much will the water rise?

(1) 12 cm (2) 9 cm

(3) 10 cm (4) 15 cm

3. The given pie-chart, shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.



In the given pie-chart by what percentage the Promotion cost on the book is less than the Paper cost?

(1) 75 (2) 50

(3) 25 (4) 60

4. If $a + b - c = 7$, $ab - bc - ca = 21$, then $a^3 + b^3 - c^3 + 3abc =$

(1) –98 (2) 98

(3) 124 (4) 117

5. If two equal circles whose centres are O and O' intersect each other at the point A and B, OO' = 12 cm and AB = 16 cm, then radius of the circle is:

(1) 12 cm (2) 15 cm

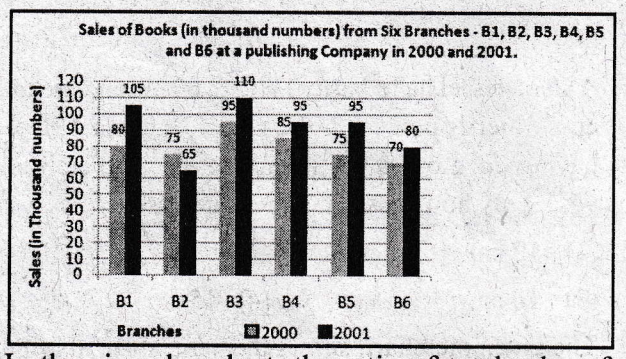
(3) 14 cm (4) 10 cm

6. A boy increases his speed to $\frac{9}{5}$ times of his original speed. By this he reaches his school 30 minutes before the usual time. How much time does he takes usually?

(1) 67.50 minutes (2) 67.10 minutes

(3) 67.75 minutes (4) 67.25 minutes

7. The given bar chart, shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.



In the given bar-chart, the ratio of total sales of all branches (in thousand numbers) for the year 2000 to 2001 is:

(1) 55 : 48 (2) 7 : 11

(3) 45 : 58 (4) 48 : 55

8. ₹15,000 was invested by A and B together to start a small business. They got a profit of ₹2,000 at the end of the year. B took his profit share of ₹600. How much did A invest?

(1) ₹10,000 (2) ₹2,000

(3) ₹10,500 (4) ₹9,000

9. Pipe A can fill a tank in 16 minutes and pipe B empties it in 24 minutes. If both the pipes are opened together, after how many minutes should B be closed, so that the tank is filled in 30 minutes?

(1) 20 minutes (2) 18 minutes

(3) 21 minutes (4) 15 minutes

10. If roots of $x^2 - 4x + a = 0$ are equal, then a =

(1) –8 (2) 4

(3) –4 (4) 8

11. If a sum becomes ₹1,460 in two years and ₹1,606 in three years due to the compound interest, the annual rate of interest is:

(1) 11% (2) 9%

(3) 10% (4) 8%

12. Fresh fruit contains 68% water and dry fruit contains 20% water. How much dry fruit can be obtained from 100 kg of flesh fruits?

(1) 80 (2) 60

(3) 40 (4) 20

13. Side AB of a triangle ABC is 80 cm long, whose perimeter is 170 cm. If angle ABC = 60°, the shortest side of triangle ABC measures..... cm.

(1) 25 (2) 21

(3) 17 (4) 15

14. $(8 + 4 - 2) \times (17 - 12) \times 10 - 89$ is equal to:

(1) 4150 (2) 4120

(3) 413 (4) 411

15. When the integer n is divided by 7, the remainder is

(3) What is the remainder if 5n is divided by 7?

(1) 0 (2) 3

(3) 2 (4) 1

16. A earns ₹40 per hour and works for 12 hours. B earns ₹60 per hour and works for 10 hours. Find the ratio of their per day wages.

(1) 4 : 5 (2) 5 : 4

(3) 15 : 4 (4) 6 : 5

17. The perimeter of a square is equal to the perimeter of a rectangle of length 16 cm and breadth 14 cm. Find the circumference of a semicircle whose diameter is equal to the side of the square.

(1) 25.57 cm (2) 31.57 cm

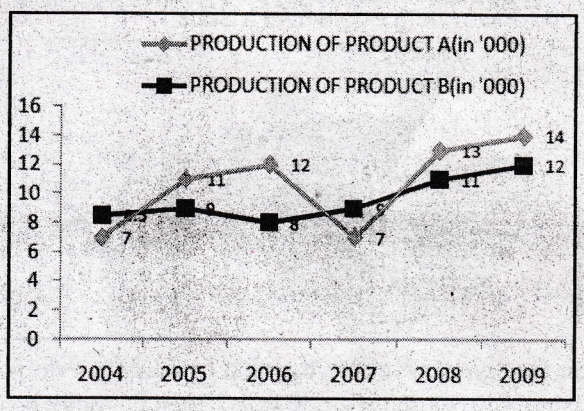
(3) 23.57 cm (4) 21.57 cm

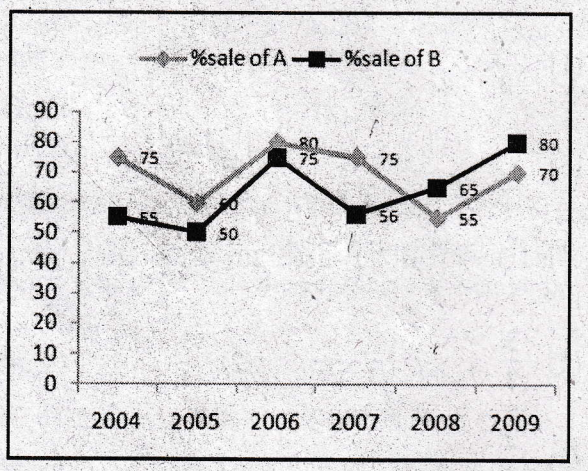
18. The unequal side of an isosceles triangle is 2 cm. The medians drawn to the equal sides are perpendicular. The area of the triangle is:

(1) 1 cm^2 (2) 3 cm^2

(3) 5 cm^2 (4) 2 cm^2

19. The line graph shows the production of product A and B (in thousands) during the period 2004 to 2009 and the second line Graph shows the percentage sale of these products.





In the given line graph. what is the total sale of Product A in the year 2005 and 2009 taken together?

(1) 17500 (2) 18500

(3) 14600 (4) 16400

20. When the sun's angle of depression changes from 30° to 60°. the length of the shadow of a tower decreases by 70 m. What is the height of the tower?

(1) 45.65 m (2) 60.55 m

(3) 65.55 m (4) 36.55 m

21. If 20% of a = b, then b% of 20 is equal to:

(1) 4% of a (2) 2% of a

(3) 16% of a (4) 8% of a

22. $(\text{cosec A} - \sin A)^2 + (\sec A - \cos A)^2 - (\cot A - \tan A)^2$ is equal to.

(1) 1 (2) 2

(3) 0 (4) -1

23. $\dfrac{0.75\times0.72\times0.72-0.393\times0.39\times0.39}{0.72\times0.72+0.72\times0.39-0.39\times0.39}$ is equal to:

(1) 0.33 (2) 0.45

(3) 0.39 (4) 0.36

24. A number is first decreased by 10% and then increased by 10%. The number so obtained is 100 less than the original number. The original number is:

(1) 100000 (2) 100

(3) 10000 (4) 1000

25. A man could not decide between discount of 30% or two successive discounts of 25% and 5%, both given on a shopping of ₹2,000. What is the difference between both the discounts?

(1) ₹15 (2) No difierence

(3) ₹20 (4) ₹25

26. At what rate percent per annum with simple interest will a sum of money double in 12.5 years?

(1) 8 (2) 10

(3) 12.5 (4). 6

27. The LCM of two numbers is 168 and their HCF is 12. If the difference between the numbers is 60. what is the sum of the numbers?

(1) 122 (2) 164

(3) 112 (4) 108

28. If $x + x^{-1} = 2$, then the value of $x^3 + x^{-3}$ is:

(1) 3 (2) $\frac{1}{2}$

(3) 1 (4) 2

29. A unique circle can always be drawn through x number of given non-collinear points, then :6 must be:

(1) 1 (2) 4

(3) 2 (4) 3

30. The speed of a car increases by 2 km/h alter every one hour. If the distance travelled in the first one hour was 35 km, what was the total distance travelled in 12 hours?

(1) 558 km (2) 650 km

(3) 560 km (4) 552 km

31. Seema bought a mobile at a discount of 20%. Had she received a discount of 25%, she could have saved additional ₹1000. How much did she pay for the mobile?

(1) ₹24,000 (2) ₹22,000

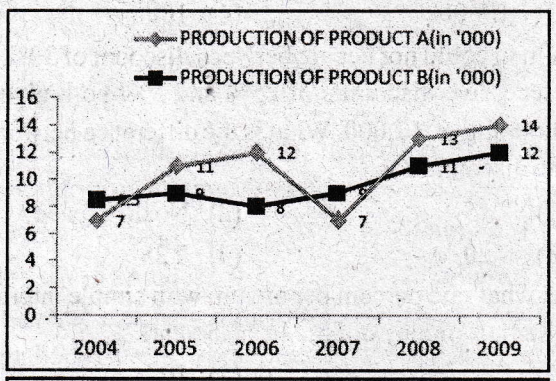
(3) ₹25,000 (4) ₹20,000

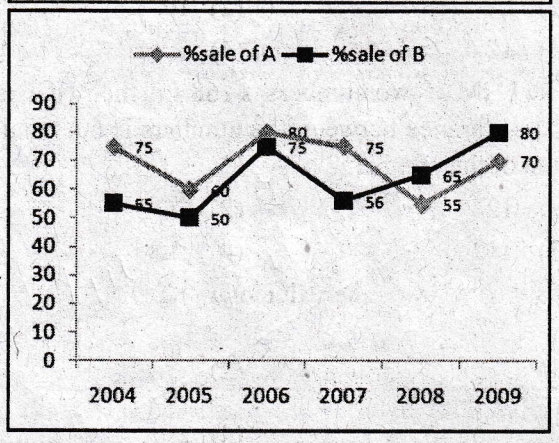
32. The average weight of 16 boys in a class is 60.25 kg and that of the remaining 10 boys is 45.75 kg. The average weight of all boys in the class is:

(1) 54.67 (2) 53.76

(3) 55.37 (4) 56.27

33. The line graph shows the production of product A and B (in thousands) during the period 2004 to 2009 and the second line Graph shows the percentage sale of these products.





In the given line graph, what is the total sale of Products A and B in the year 2007?

(1) 13460 (2) 10290

(3) 11500 (4) 12490

34. A cube of side 1 m length is cut into small cubes of side 10 cm each. How many such small cubes can be obtained?

(1) 10 (2) 100

(3) 10000 (4) 1000

35. A sells a car to B at 10% loss. If B sells it for ₹5,40,000 and gains 20%. the cost price of the car for A was:

(1) ₹5,10,000 (2) ₹5,40,000

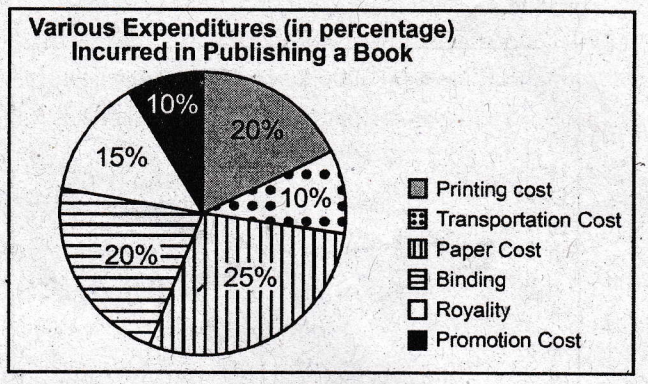
(3) ₹5,20,000 (4) ₹5,00,000

36. If $a + b = 8$, $ab = -12$, then $a^3 + b^3 =$

(1) –244 (2) –833

(3) 800 (4) 833

37. The given pie-chart, shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.



In the given pie-chart, by what percentage Printing and Binding cost on the book is less than the other costs?

(1) $\frac{50}{3}$ (2) $\frac{100}{3}$

(3) $\frac{47}{3}$ (4) $\frac{20}{3}$

38. $\frac{4}{3}\tan^2 60° + 3\cos^2 30° - 2\sec^2 30° - \frac{3}{4}\cot^2 60°$ is equal to:

(1) $\frac{8}{3}$ (2) $\frac{5}{4}$

(3) $\frac{7}{3}$ (4) $\frac{10}{3}$

39. The average of 26 numbers is zero. Of them, how many may be greater than zero, at the most?

(1) 0 (2) 25

(3) 20 (4) 15

40. What will be total cost of polishing curved surface of a wooden cylinder at rate of ₹20 per m^2, if its diameter is 40 cm and height is 7m?

(1) ₹186 (2) ₹184

(3) ₹175 (4) ₹176

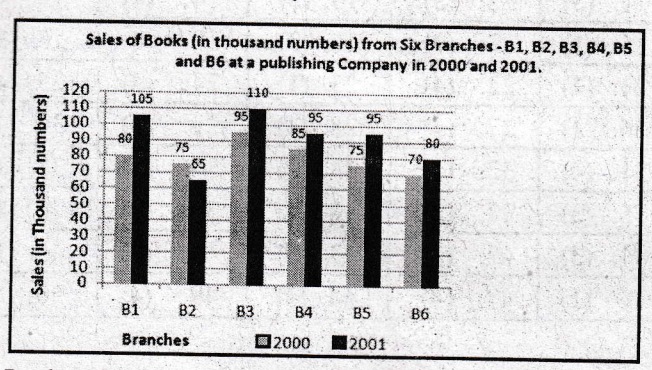
41. A can do a work in 20 days, while B can do the same work in 25 days. They started the work jointly. Few days later C also joined them and thus all of them completed the whole work in 10 days. All of them were paid total of ₹700. What is the share of C?

(1) ₹75 (2) ₹55

(3) ₹70 (4) ₹65

Instructions

The given bar chart. shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.



42. In the given bar-chart, total sales of branches B1, B3 and B5 taken together for both the years (in thousand numbers) is:

(1) 560 (2) 240

(3) 310 (4) 650

43. In the given bar-chart, the ratio of total sales of branches B1, B3 and B5 to total sales of branches B2, B4 and B6 taken together for both the years (in thousand numbers) is:

(1) 45 : 23 (2) 47 : 56

(3) 56 : 47 (4) 23 : 45

44. From a point P on a level ground, the angle of elevation of the top of a tower is 30°. If the tower is 270 m high. the distance of point P from the foot of the tower is:

(1) 476.65 m

(2) 367.65 m

(3) 467.65 m

(4) 376.65 m

45. The product of two numbers is 6760 and their HCF is 13. How many such pair of numbers can be formed?

(1) 1 (2) 2

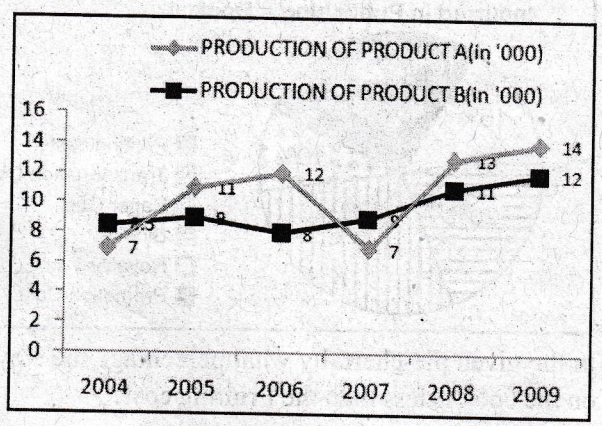
(3) 3 (4) 4

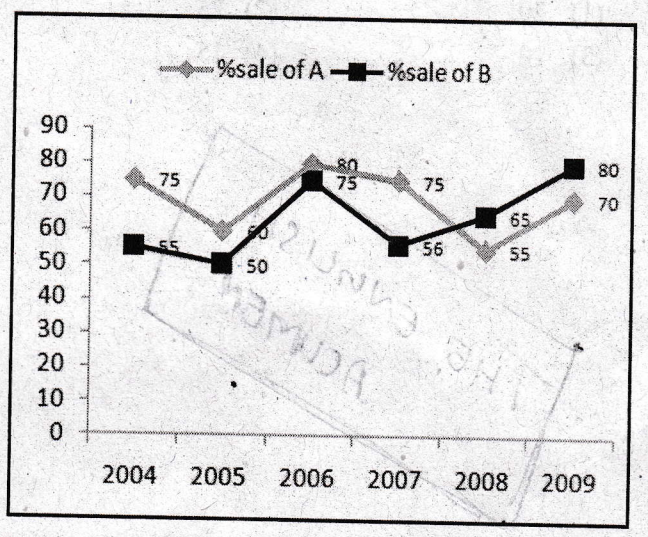
46. 12 buckets of water fill a tank when the capacity of each bucket is 13.5 litres. How many buckets will be needed to fill the same tank. if the capacity of each bucket is 9 litres?

(1) 18 (2) 16

(3) 15 (4) 17

47. The line graph shows the production of product A and B (in thousands) during the period 2004 to 2009 and the second line Graph shows the percentage sale of these products.





In the given line graph, what is the total sale of Product B in the year 2004 and 2008 together?

(1) 12500 (2) 14600

(3) 11950 (4) 11825

48. Original breadth of a rectangular box is 20 cm. The box was then remade in such a way that its length increased by 30% but the breadth decreased by 20% and the area increased by 100 cm². What is the new area of the box?

(1) 2500 cm² (2) 2200 cm²

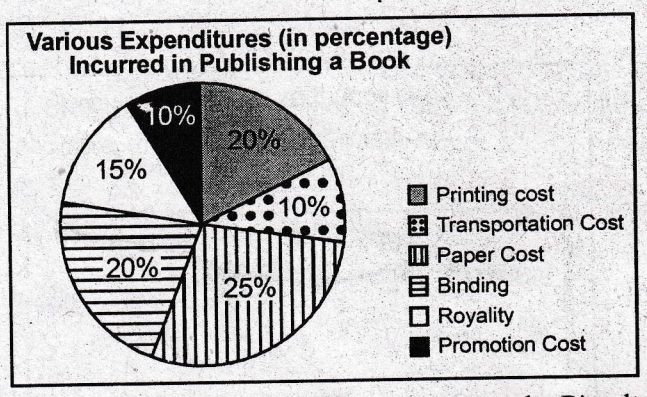
(3) 2400 cm² (4) 2600 cm²

49. 3 men, 4 women and 6 children can complete a work in 7 days. A woman does double the work a man does and a child does half the work a man does. How many women alone can complete this work in 7 days?

(1) 6 (2) 8

(3) 9 (4) 7

50. The given pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pic-chart and the answer the questions based on it.



In the given pie-chart, by what percentage the Royalty on the book is less than the Printing cost?

(1) 20 (2) 25

(3) 10 (4) 15

Answers

1. (2)	2. (4)	3. (4)	4. (1)	5. (4)
6. (1)	7. (4)	8. (3)	9. (3)	10. (2)
11. (3)	12. (3)	13. (3)	14. (4)	15. (4)
16. (1)	17. (3)	18. (2)	19. (4)	20. (2)
21. (1)	22. (4)	23. (1)	24. (3)	25. (4)
26. (1)	27. (4)	28. (4)	29. (4)	30. (4)
31. (4)	32. (1)	33. (2)	34. (4)	35. (1)
36. (3)	37. (2)	38. (4)	39. (2)	40. (3)
41. (3)	42. (1)	43. (3)	44. (3)	45. (2)
46. (1)	47. (4)	48. (4)	49. (4)	50. (2)