

Q.1 The base of a triangle is increased by 30%. By what percentage (correct to two decimal places) can its height be increased so that the area increases by 50%?

- Ans**
- 1. 10.53%
 - 2. 12.38%
 - 3. 13.53%
 - 4. 15.38%

Question ID : 65497818185
Chosen Option : 4

Q.2 On selling a bat for ₹954, a man gains 6%. What should be its selling price (in ₹) to gain 8%?

- Ans**
- 1. 958
 - 2. 1,080
 - 3. 972
 - 4. 1,054

Question ID : 65497818186
Chosen Option : 3

Q.3 The mean of 11, 10, 12, 13, 15, x and 17, is 15. The value of x is:

- Ans**
- 1. 18
 - 2. 29
 - 3. 25
 - 4. 27

Question ID : 65497818193
Chosen Option : 4

Q.4 A manufacturer marks the price of an article at ₹1,200. He sells it to a trader at a discount of 10%. The trader gets a further discount of 5% on his net payment for paying in cash. What amount (in ₹) does the trader pay to the manufacturer?

- Ans**
- 1. 1,026
 - 2. 1,056
 - 3. 1,080
 - 4. 1,020

Question ID : 65497818184
Chosen Option : 4

Q.5 What is the LCM of 0.126, 0.36 and 0.96?

- Ans
- 1. 20160
 - 2. 20.16
 - 3. 201.60
 - 4. 2.016

Question ID : 65497818197
Chosen Option : 2

Q.6 The average weight of Sohum and his five friends is 48.5 kg. If Sohum is 3 kg more than the average weight of his five friends, what is Sohum's weight (in kg)?

- Ans
- 1. 51.0
 - 2. 50.0
 - 3. 50.5
 - 4. 51.5

Question ID : 65497818182
Chosen Option : 1

Q.7 A solid cube of side 15 cm is dropped into a rectangular container of length 25 cm, breadth 20 cm and height 18 cm, which is partly filled with water. If the cube is completely submerged, then the rise of water level (in cm) is:

- Ans
- 1. 7.75
 - 2. 5.25
 - 3. 8.75
 - 4. 6.75

Question ID : 65497818194
Chosen Option : 2

Q.8 Two trains A and B start with uniform speeds at the same time from points P and Q, respectively, towards each other. After crossing each other, A takes 16 hours to reach Q and B takes 4 hours to reach P. If train A is moving with a speed of 54 km/h, the speed of B (in km/h) is:

- Ans
- 1. 112
 - 2. 27
 - 3. 36
 - 4. 108

Question ID : 65497818181
Chosen Option : 4

Q.9 A certain sum amounts to ₹1,543.50 when invested for 2 years at 5% per annum compound interest. What is the sum (in ₹)?

- Ans**
- 1. 1,500
 - 2. 1,400
 - 3. 1,200
 - 4. 1,600

Question ID : 65497818191
Chosen Option : 2

Q.10 The simplified value of $\frac{109 - \{121 \div (11 \text{ of } 11) - (-4) - (3 - \overline{8 - 1})\}}{125 - (-3)(4 - \overline{6 - 2}) + 3\{5 + (-3) \text{ of } (-6)\}}$ is:

- Ans**
- 1. 125
 - 2. $\frac{4}{5}$
 - 3. 100
 - 4. $\frac{5}{4}$

Question ID : 65497818400
Chosen Option : 2

Q.11 A certain sum of money, when invested at a certain rate of simple interest, amounts to Rs 1,102 in 2 years and Rs 1,600 in 5 years. What is the principal amount (in Rs):

- Ans**
- 1. 770
 - 2. 880
 - 3. 990
 - 4. 1,270

Question ID : 65497818192
Chosen Option : 1

Q.12 To do a certain work, the ratio of the efficiencies of A and B is 5 : 11. Working together, they can do the same work in $27\frac{1}{2}$ days. A and B work together for 20 days. C alone completes the remaining work in 18 days. C alone can do 75% of the original work in:

- Ans**
- 1. $56\frac{1}{2}$ days
 - 2. 35 days
 - 3. 33 days
 - 4. $49\frac{1}{2}$ days

Question ID : 65497818179
Chosen Option : 4

Q.13 John sold a watch to Sue at a gain of 20%, and Sue sold it to Rima at a profit of 10%. If Rima paid ₹2,178 for it, how much did John pay (in ₹) for the watch?

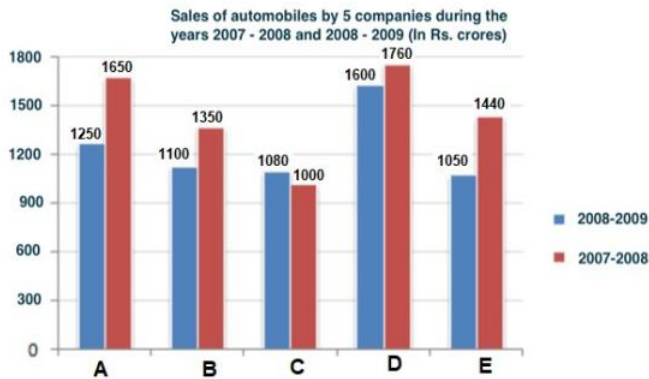
- Ans**
- ✓ 1. 1,650
 - ✗ 2. 1,780
 - ✗ 3. 1,478
 - ✗ 4. 1,200

Question ID : 65497818187
Chosen Option : 1

Q.14 The given bar graph represents the sales of automobiles (in ₹ crores) by five companies A, B, C, D and E in the years 2007-2008 and 2008-2009.

Study the bar graph and answer the question that follows.

(Note: The data shown below is only for mathematical exercise. It does not represent the actual figures of the companies)



What should have been the sales (in ₹ crores) of company E in 2008-2009 so that it would have shown the same increase over 2007-2008 as shown by the sales of automobiles of company C during these years?

- Ans**
- ✗ 1. 1,130
 - ✓ 2. 1,520
 - ✗ 3. 1,360
 - ✗ 4. 1,650

Question ID : 65497818201
Chosen Option : 4

Q.15 One-third of a journey is covered at a rate of 40 km/h, one-fourth at the rate of 35 km/h, and the rest at the rate of 45 km/h. The average speed for the whole journey (in km/h) is:

- Ans
- 1. $\frac{5670}{187}$
 - 2. $\frac{6750}{187}$
 - 3. $\frac{6570}{187}$
 - 4. $\frac{7560}{187}$

Question ID : 65497818183
Chosen Option : 4

Q.16 P can do a piece of the work in 18 days and Q can do same work in 36 days. How long will they take (in days), if they work together, to complete the above mentioned work?

- Ans
- 1. 24
 - 2. 12
 - 3. 20
 - 4. 10

Question ID : 65497818178
Chosen Option : 2

Q.17 If three numbers are in the proportion of 1 : 3 : 4 and two times the sum of the numbers is 80, then the proportion of the squares of the numbers is:

- Ans
- 1. 4 : 36 : 64
 - 2. 25 : 225 : 500
 - 3. 1 : 9 : 16
 - 4. 9 : 81 : 144

Question ID : 65497818189
Chosen Option : 4

Q.18 An earthworm of length 18 cm is crawling along a certain path with a speed of 4 cm/s. An insect overtakes the earthworm in 6 s. How fast (in cm/s) is the insect walking? Assume that they both are walking along parallel paths.

- Ans
- 1. 7.0
 - 2. 6.5
 - 3. 5.5
 - 4. 6.0

Question ID : 65497818180
Chosen Option : 1

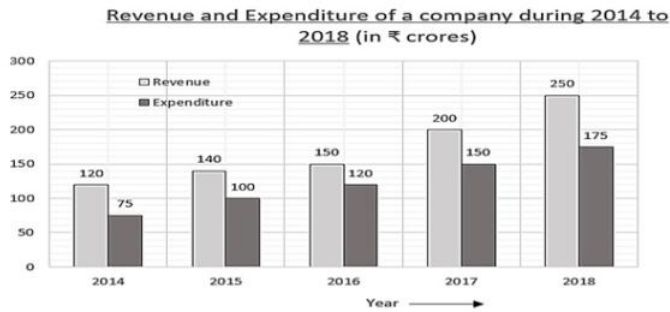
Q.19 The sum of the height and radius of the base of a solid right circular cylinder is 46 cm. If the total surface area of the solid cylinder is 6072 cm^2 , what is the volume (in cm^3) of the cylinder?

(Use $\pi = \frac{22}{7}$)

- Ans**
- ✓ 1. 11025π
 - ✗ 2. 3036π
 - ✗ 3. 11025
 - ✗ 4. 3036

Question ID : 65497818196
Chosen Option : 1

Q.20 Study the given graph and answer the question that follows.



In how many years is the profit (Revenue – Expenditure) as a percentage of revenue, more than 28%?

- Ans**
- ✗ 1. 2
 - ✗ 2. 4
 - ✓ 3. 3
 - ✗ 4. 1

Question ID : 65497818202
Chosen Option : 3

Q.21 A solid right circular cone is cut into two parts by a plane parallel to its base and at a point one-third vertically below its vertex. What is the ratio of the volume of the smaller cone to that of the whole cone?

- Ans**
- ✗ 1. $\frac{1}{9}$
 - ✗ 2. $\frac{1}{8}$
 - ✓ 3. $\frac{1}{27}$
 - ✗ 4. $\frac{1}{3}$

Question ID : 65497818195
Chosen Option : 3

Q.22 The value of $\frac{13}{70} \div \left[\frac{4}{5} \left(\frac{1}{3} - \frac{1}{4} \times \frac{1}{5} \right) \div 2\frac{5}{6} \right] - 1\frac{9}{28}$ is:

- Ans
- 1. 20
 - 2. 1
 - 3. 10
 - 4. 12

Question ID : 65497816179
Chosen Option : 2

Q.23 The ratio of the number of students in Science to that in Humanities, in Grade 12 of 360 students, is 2 : 3. When some new students are admitted, the number of Science students increase by 18 and the ratio of the Science students to Humanities students changes to 3 : 5. What is the number of new Humanities students admitted?

- Ans
- 1. 54
 - 2. 45
 - 3. 63
 - 4. 72

Question ID : 65497818188
Chosen Option : 1

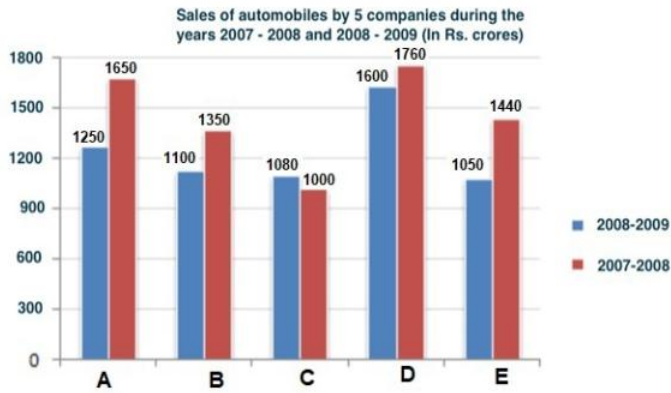
Q.24 The capacities of three containers P, Q and R are in the proportion of 5 : 4 : 8. They are completely filled with a mixture of milk and water in the proportions of 1 : 4, 2 : 3 and 3 : 5, respectively. If the mixtures of all the three containers are mixed together, then what will be the proportion of milk to water in the final mixture?

- Ans
- 1. 1 : 2
 - 2. 16 : 81
 - 3. 25 : 64
 - 4. 28 : 57

Question ID : 65497818190
Chosen Option : 4

Q.25 The given bar graph represents the sales of automobiles (in ₹ crores) by five companies A, B, C, D and E in the years 2007-2008 and 2008-2009. Study the bar graph and answer the question that follows.

(Note: The data shown below is only for mathematical exercise. It does not represent the actual figures of the companies)



What is the percentage difference (correct to two places of decimals) of the combined sales of the five companies in 2008-2009 compared to the combined sales of the five companies in 2007-2008?

- Ans 1. 15.56%
 2. 16.48%
 3. 18.42%
 4. 17.64%

Question ID : 65497818200
Chosen Option : 1