Q.1 A certain number of persons can complete a work in 54 days. If there were 15 persons less, it would take 18 days more for the work to be completed. Initially, the number of persons is:

Ans

✔ 1. 60

✘ 2. 50

✘ 3. 72

✘ 4. 56

Question ID : **6549786475**
Status : **Answered**
Chosen Option : **1**

Q.2 If the ratio of A : B is 5 : 4 and B : C is 3 : 5 then the ratio of A : B : C is:

Ans

✘ 1. 20 : 15 : 12

✘ 2. 15 : 20 : 12

✘ 3. 12 : 15 : 20

✔ 4. 15 : 12 : 20

Question ID : **6549786886**
Status : **Answered**
Chosen Option : **4**

Q.3 If $a^2 + 4b^2 + 25c^2 + 18 = 2(a - 2b + 20c)$, then what is the value of $(a + 2b + 5c)$?

Ans

✘ 1. 5

✘ 2. 6

✘ 3. 3

✔ 4. 4

Question ID : **6549786489**
Status : **Not Answered**
Chosen Option : **--**

Q.4 The side BC of ΔABC is produced to D. The bisectors of $\angle ABC$ and $\angle ACD$ meet at E. If $AB = AC$ and $\angle BEC = 35°$, then the measure of $\angle ABC$ will be:

Ans

✘ 1. $35°$

✘ 2. $75°$

✔ 3. $55°$

✘ 4. $45°$

Question ID : **6549786890**
Status : **Answered**
Chosen Option : **3**

Q.5 The value of $\left(5\frac{5}{6} \div 3\frac{1}{2} \text{ of } \frac{10}{21}\right) \div \left(\frac{3}{4} \div 1\frac{1}{2} \text{ of } \frac{4}{5} - \frac{4}{5} \times \frac{1}{2}\right) \text{ of } \frac{35}{18}$ is:

Ans

✔ 1. 8

✘ 2. 6

✘ 3. $3\frac{1}{2}$

✘ 4. $1\frac{4}{5}$

Question ID : **6549786492**
Status : **Answered**
Chosen Option : **3**

Q.6 $PQRS$ is a cyclic quadrilateral. If $\angle P$ is four times $\angle R$ and $\angle S$ is three times $\angle Q$, then sum of the measures of $\angle S$ and $\angle R$ will be:

Ans

✘ 1. 175°

✘ 2. 165°

✔ 3. 171°

✘ 4. 192°

Question ID : **6549786888**
Status : **Answered**
Chosen Option : **3**

Q.7 A shopkeeper buys some notebooks at the rate of 12 for ₹222, and an equal number of notebooks at 10 for ₹225. If he sells all the notebooks at a profit of 20%, then the selling price of 15 notebooks is:

Ans

✔ 1. ₹369

✘ 2. ₹376.5

✘ 3. ₹360

✘ 4. ₹302.40

Question ID : **6549786481**
Status : **Not Answered**
Chosen Option : **--**

Q.8 If $(cos^2\theta - 1)(2sec^2\theta) + sec^2\theta + 2tan^2\theta = 2$, $0° < \theta < 90°$, then the value of $\frac{(sec\theta + sin\theta)}{(cosec\theta - cos\theta)}$ will be:

Ans

✘ 1. -3

✔ 2. 3

✘ 3. -1

✘ 4. 2

Question ID : **6549786898**
Status : **Not Answered**
Chosen Option : **--**

Q.9 In $\triangle ABC$, $\angle B = 90°$. AD and CE are the medians drawn from A and C, respectively. If $AC = 10$ cm and $AD = \sqrt{55}$cm, then the length of CE is:

Ans

✗ 1. $5\sqrt{3}$cm

✗ 2. $2\sqrt{15}$cm

✓ 3. $\sqrt{70}$cm

✗ 4. $\sqrt{66}$cm

Question ID : **6549786487**
Status : **Answered**
Chosen Option : **2**

Q.10 The area of a triangular field whose sides are 96 m, 110 m, and 146 m is equal to the area of a rectangular park whose sides are in the ratio 3 : 2. What is the perimeter (in m) of the rectangular park?

Ans

✗ 1. $80\sqrt{5}$

✓ 2. $40\sqrt{55}$

✗ 3. $20\sqrt{55}$

✗ 4. $40\sqrt{11}$

Question ID : **6549786477**
Status : **Answered**
Chosen Option : **4**

Q.11 A and B are two points on a circle with centre O. C is a point on the minor arc of the circle between points A and B. The tangents to the circle at A and B meet each other at a point D. If $\angle ADB = 25°$, then $\angle ACB$ (in degrees) is equal to:

Ans

✓ 1. 102.5

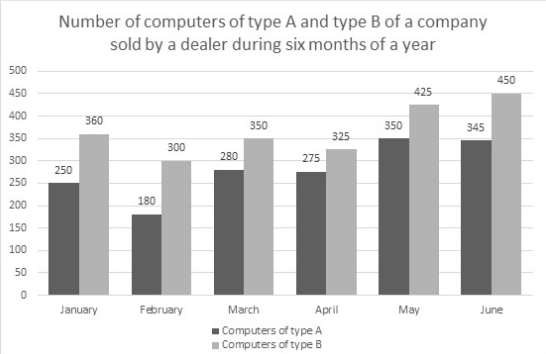
✗ 2. 100.5

✗ 3. 100

✗ 4. 105

Question ID : **6549786485**
Status : **Not Answered**
Chosen Option : **--**

Q.12 Study the given graph and answer the question that follows.



If there is a profit of ₹2,500 and ₹3,000 on the sale of one computer of type A and one computer of type B, respectively, then what is the total profit (in thousand rupees) on the sale of 15% computers of type A in February and 10% computers of type B in June?

Ans

✔ 1. 202.5

✘ 2. 212.5

✘ 3. 172.5

✘ 4. 192.5

Question ID : **6549786498**
Status : **Not Answered**
Chosen Option : **--**

Q.13 A person rows upstream a distance of 55 km in 5 hours and rows downstream a distance of 75 km in 3 hours. How much time will he take to row a distance of 96 km in still water?

Ans

✘ 1. 4 hours 40 minutes

✘ 2. 6 hours 10 minutes

✘ 3. 5 hours 45 minutes

✔ 4. 5 hours 20 minutes

Question ID : **6549786880**
Status : **Not Answered**
Chosen Option : **--**

Q.14 If $3(\sec^2\theta + tan^2\theta) = 5, 0° < \theta < 90°$, then the value of $cosec\,\theta$ is:

Ans

✔ 1. 2

✘ 2. $\frac{1}{2}$

✘ 3. $\frac{1}{\sqrt{3}}$

✘ 4. $\frac{2\sqrt{3}}{3}$

Question ID : **6549786495**
Status : **Not Answered**
Chosen Option : **--**

Q.15 The marked price of an article is ₹300. It is sold for ₹177.84 after giving three successive discounts of 20%, x % and 5%. What is the value of x ?

Ans

✗ 1. 15

✓ 2. 22

✗ 3. 24

✗ 4. 18

Question ID : **6549786479**
Status : **Answered**
Chosen Option : **1**

Q.16 Study the given table and answer the question that follows.
In the table, the annual consumption (in hundred tonnes) of coffee in five states (A, B, C, D and E) across six years (2014 to 2019) is given.

State / Year	A	B	C	D	E
2014	112	130	136	105	117
2015	122	138	150	140	120
2016	124	134	142	144	132
2017	132	154	198	149	133
2018	135	148	187	151	145
2019	153	136	198	150	187

By what percentage is the total consumption of coffee in state D from 2014 to 2016 less than the total consumption of coffee in the states A, B, C and E in 2015(correct to one decimal place)?

Ans

✓ 1. 26.7%

✗ 2. 32.5%

✗ 3. 25.2%

✗ 4. 27.7%

Question ID : **6549786903**
Status : **Not Answered**
Chosen Option : **--**

Q.17 If $x + \frac{1}{x} = 7$, then $x^3 + \frac{1}{x^3}$ is equal to:

Ans

✗ 1. 343

✗ 2. 161

✗ 3. 340

✓ 4. 322

Question ID : **6549786892**
Status : **Answered**
Chosen Option : **4**

Q.18 If the average of the 3-digit numbers $335, 2x5, x35, 63x$ and 406 is 411, then what will be the average of $x-1$, $x-3$, $x+3$ and $x+5$?

Ans

✗ 1. 6

✗ 2. 4

✗ 3. 3

✓ 4. 5

Question ID : **6549786882**
Status : **Answered**
Chosen Option : **1**

Q.19 A mobile phone is available for ₹79,860 by cash payment or by paying cash of ₹60,000 as down payment and the remaining amount in three equal annual instalments. If the shopkeeper charges interest at the rate of 10% per annum compounded annually, then the amount of each instalment (in ₹) will be:

Ans

✗ 1. 6,789

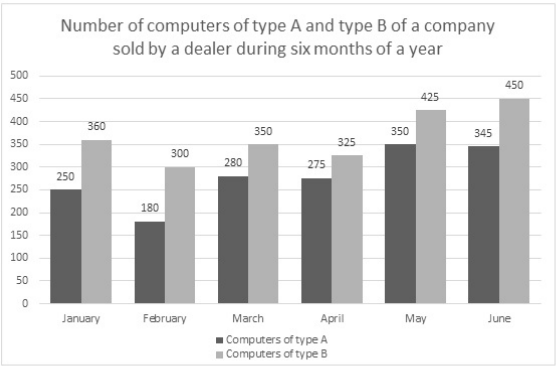
✓ 2. 7,986

✗ 3. 6,000

✗ 4. 6,689

Question ID : **6549786887**
Status : **Not Answered**
Chosen Option : **--**

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



The ratio of the total number of computers of type A sold in February, April and June to the total number of computers of type B sold in April and May is:

Ans

✗ 1. 11 : 13

✓ 2. 16 : 15

✗ 3. 14 : 15

✗ 4. 8 : 7

Question ID : **6549786496**
Status : **Not Answered**
Chosen Option : **--**

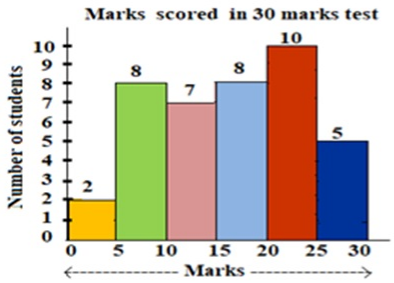
Q.21 If $\sin\theta = \frac{12}{13}$, then $\frac{\sin^2\theta - \cos^2\theta}{2\cos\theta\sin\theta} \times \cot^2\theta = ?$

Ans

1. $\frac{595}{1152}$
2. $\frac{119}{144}$
3. $\frac{595}{3456}$
4. $\frac{119}{864}$

Question ID : **6549786493**
Status : **Answered**
Chosen Option : **2**

Q.22 The histogram shows the marks scored by 40 students in a test with maximum 30 marks.



What is the ratio of the number of students who scored marks in the class intervals 10 - 15 and 15 - 20 taken together to that of the students in the class intervals 5 - 10 and 25 - 30 taken together?

Ans

1. 15 : 13
2. 13 : 15
3. 17 : 13
4. 1 : 1

Question ID : **6549788114**
Status : **Answered**
Chosen Option : **1**

Q.23 If decreasing 180 by x % gives the same result as increasing 60 by x %, then x % of 410 will be more than (x +20)% of 210 (correct to two decimal places) by:

Ans

1. 37.57%
2. 36.57%
3. 39.46%
4. 31.67%

Question ID : **6549786884**
Status : **Answered**
Chosen Option : **1**

Q.24 If $x + y + z = 4, xy + yz + zx = 1$ and $x^3 + y^3 + z^3 = 34$, then what is the value of $2xyz$?

Ans
1. 8
2. −12
3. 18
4. −6

Question ID : **6549786490**
Status : **Answered**
Chosen Option : **3**

Q.25 Which of the following is divisible by 88?

Ans
1. 2767416
2. 2767440
3. 2776408
4. 2776400

Question ID : **6549786895**
Status : **Answered**
Chosen Option : **4**