

Q.1

If $\frac{3^{a+3} \times 4^{a+6} \times 25^{a+1}}{27^{a-1} \times 8^{a-2} \times 125^{a+4}} = \frac{4}{15^{26}}$, then the value of $\sqrt{a+9}$ is:

- Ans ☒ 1. 5
☐ 2. 6
☐ 3. 8
☐ 4. 4

Question ID : 424429571

Status : Answered

Chosen Option : 1

Q.2

The value of $5\sqrt{3} + 7\sqrt{2} - \sqrt{6} - \frac{23}{\sqrt{2} + \sqrt{3} + \sqrt{6}}$ is:

- Ans ☐ 1. 16
☐ 2. 0
☐ 3. 10
☒ 4. 12

Question ID : 424429572

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.3

A man takes a loan of some amount at some rate of simple interest. After three years, the loan amount is doubled and rate of interest is decreased by 2%. After 5 years, if the total interest paid on the whole is ₹13,600, which is equal to the same when the first amount was taken for $11\frac{1}{3}$ years, then the loan taken initially is:

- Ans ☐ 1. ₹13,600
☐ 2. ₹12,500
☐ 3. ₹12,000
☒ 4. ₹10,000

Question ID : 424429565

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.4

If $x + y = 14$; $x^3 + y^3 = 1064$, then the value of $(x - y)^2$ is:

- Ans ☒ 1. 36
☐ 2. 64
☐ 3. 81
☐ 4. 100

Question ID : 424429570

Status : Answered

Chosen Option : 1

Q.5 If $\tan^4 x - \tan^2 x = 1$, then the value of $\sin^4 x + \sin^2 x$ is:

- Ans ☒ 1. 1
☒ 2. $\frac{1}{2}$
☒ 3. $\frac{3}{4}$
☒ 4. $\frac{3}{2}$

Question ID : 424429577

Status : Answered

Chosen Option : 1

Q.6 Which of the following values suits for A to make the equation $\frac{A \tan 62^\circ \sec 28^\circ \cot 38^\circ}{\operatorname{cosec} 62^\circ \tan 11^\circ} = 1$ true?

- Ans ☒ 1. $\frac{\tan 28^\circ \tan 79^\circ}{\tan 38^\circ}$
☒ 2. $\frac{\tan 38^\circ \tan 79^\circ}{\tan 28^\circ}$
☒ 3. $\frac{\tan 28^\circ \tan 38^\circ}{\tan 79^\circ}$
☒ 4. $\frac{\tan 38^\circ}{\tan 79^\circ \tan 28^\circ}$

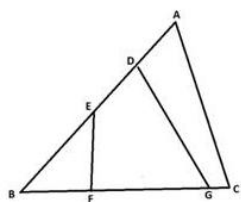
Question ID : 424429576

Status : Answered

Chosen Option : 3

Q.7 In the given figure, if $AD = 3$, $DE = 4$, $AB = 12$, $BF = 2$, $FG = 6$, $BC = 10$, then the value of $\frac{M}{N}$ is:

(Assume: M is the area of the quadrilateral FGDE and N is the area of the triangle ABC.)



- Ans ☒ 1. $\frac{1}{2}$
☒ 2. $\frac{1}{3}$
☒ 3. $\frac{25}{49}$
☒ 4. $\frac{31}{60}$

Question ID : 424429568

Status : Answered

Chosen Option : 4

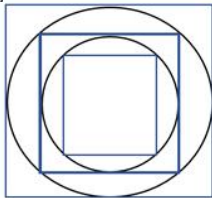
Q.8 A crate of fruits contains one spoiled fruit for every 25 fruits. 60% of the spoiled fruits were sold. If the seller had sold 48 spoiled fruits, then the number of fruits in the crate were:

- Ans**
- ☒ 1. 3000
 - ☒ 2. 2000
 - ☒ 3. 1200
 - ☒ 4. 2400

Question ID : 424429562

Status : Answered

Chosen Option : 2

Q.9

In the given figure, the ratio of the area of the largest square to that of the smallest square is:

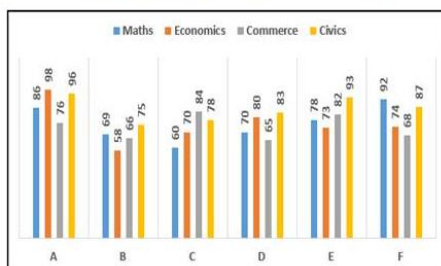
- Ans**
- ☒ 1. 4 : 1
 - ☒ 2. 3 : 1
 - ☒ 3. 2 : 1
 - ☒ 4. $\sqrt{2} : 1$

Question ID : 424429566

Status : Answered

Chosen Option : 1

Q.10 The following bar graph shows the marks (out of 100) of students A, B, C, D, E and F in the subjects mentioned.



Based on this, only 2 students crossed the average marks in the subject:

- Ans**
- ☒ 1. Maths
 - ☒ 2. Commerce
 - ☒ 3. Civics
 - ☒ 4. Economics

Question ID : 424429579

Status : Not Answered

Chosen Option : --

Q.11 Water flows into a tank $180\text{ m} \times 140\text{ m}$ through a rectangular pipe of $1.2\text{ m} \times 0.75\text{ m}$ at a rate of 15 km/h . In what time will the water rise by 4 m ?

- Ans** ☒ 1. 7 hours 28 minutes
☒ 2. 6 hours 42 minutes
☒ 3. 8 hours 12 minutes
☒ 4. 5 hours 46 minutes

Question ID : 424429559

Status : Answered

Chosen Option : 1

Q.12 A train travels the distance between stations P and Q at a speed of 126 km/h , while in the opposite direction it comes back at 90 km/h . Another train travels the same distance at the average speed of the first train. The time taken by the second train to travel 525 km is:

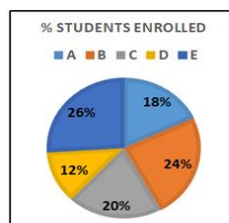
- Ans** ☒ 1. 4 hours 20 min
☒ 2. 5 hours 20 min
☒ 3. 5 hours
☒ 4. 4 hours

Question ID : 424429558

Status : Answered

Chosen Option : 3

Q.13 The given pie chart shows the percentage of students enrolled for the courses A, B, C, D and E in a university and the table shows the percentage of students that passed, out of the enrolled students.



Courses	% passed out
A	76
B	82
C	80
D	90
E	75

If the total number of students is 60000 , then the total number of students who did not pass in the courses A, C is:

- Ans** ☒ 1. 7852
☒ 2. 4992
☒ 3. 8254
☒ 4. 7628

Question ID : 424429580

Status : Not Answered

Chosen Option : --

Q.14 The difference between the selling prices of some articles if sold for ₹12 per article instead of ₹9 per article is ₹150. If the cost price of these articles is ₹250, then find the selling price of 21 articles if profit earned is 20%.

- Ans** ☒ 1. ₹126
☒ 2. ₹125
☒ 3. ₹130
☒ 4. ₹136

Question ID : 424429563

Status : Answered

Chosen Option : 1

Q.15 If the 8-digit number $1a765b12$ is to be divisible by 72, the least value of $(2a + 3b)$ is:

- Ans ☒ 1. 11
☒ 2. 10
☒ 3. 9
☒ 4. 12

Question ID : 424429573
 Status : Answered
 Chosen Option : 1

Q.16 If 27 people, working 8 hours a day, can complete a task in 12 days, then in how many days will 18 people finish the task, working 9 hours a day?

- Ans ☒ 1. 15 days
☒ 2. 20 days
☒ 3. 16 days
☒ 4. 18 days

Question ID : 424429557
 Status : Answered
 Chosen Option : 3

Q.17 If A and B are acute angles and $\sec A = 3$; $\cot B = 4$, then the value of $\frac{\csc^2 A + \sin^2 B}{\cot^2 A + \sec^2 B}$ is:

- Ans ☒ 1. $\frac{25}{261}$
☒ 2. $\frac{322}{323}$
☒ 3. $\frac{1}{261}$
☒ 4. 2

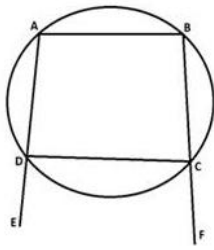
Question ID : 424429575
 Status : Not Answered
 Chosen Option : --

Q.18 If the single discount equivalent to successive discounts of 20% and x% is 24%, then the value of x is:

- Ans ☒ 1. 6%
☒ 2. 5%
☒ 3. 4%
☒ 4. 8%

Question ID : 424429561
 Status : Not Answered
 Chosen Option : --

Q.19 In the given figure, chords AD and BC in the circle, are extended to E and F, respectively.



If $\angle CDE = 85^\circ$; $\angle DCF = 94^\circ$, then the value of $\angle ABF + \angle EAB$ is:

- Ans
- ☒ 1. 194°
 - ☒ 2. 179°
 - ☒ 3. 168°
 - ☒ 4. 182°

Question ID : 424429567

Status : Not Answered

Chosen Option : --

Q.20

The value of $\left[5\frac{4}{9} \div \left(\frac{11}{4} - \frac{13}{6} \right)^2 \right] \div \left[7\frac{3}{11} \text{ of } 8\frac{4}{5} \div 1\frac{5}{7} - \frac{4}{3} \right]^2$ is:

- Ans
- ☒ 1. $\frac{1}{61}$
 - ☒ 2. $\frac{1}{91}$
 - ☒ 3. $\frac{1}{71}$
 - ☒ 4. $\frac{1}{81}$

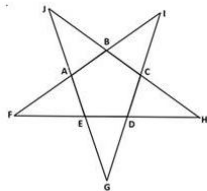
Question ID : 424429574

Status : Not Answered

Chosen Option : --

Q.21

ABCDE is a regular pentagon. Its sides are extended as shown in the figure. The value of $\frac{\angle ABC + 2\angle EGD + 3\angle BAJ}{6}$ is:



- Ans
- ☒ 1. 30°
 - ☒ 2. 75°
 - ☒ 3. 66°
 - ☒ 4. 45°

Question ID : 424429569

Status : Not Answered

Chosen Option : --

Q.22 Dividing the amount ₹18,144 among three people A, B, C in the ratio 3 : 5 : 8, the amount B gets more than A, is:

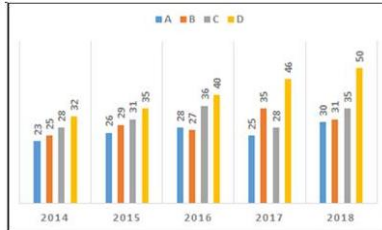
- Ans
- ✓ 1. ₹2,268
 - ✗ 2. ₹2,386
 - ✗ 3. ₹2,178
 - ✗ 4. ₹2,464

Question ID : 424429564

Status : Not Answered

Chosen Option : --

Q.23 The following bar graph shows the data of the production of an item (in thousand tonnes) from four different companies A, B, C and D during the years mentioned.



In the five years given, the average production is highest in company _____ and lowest in company _____, respectively.

- Ans
- ✗ 1. A; B
 - ✗ 2. C; A
 - ✗ 3. B; C
 - ✓ 4. D; A

Question ID : 424429581

Status : Not Answered

Chosen Option : --

Q.24 The sum of 17 consecutive numbers is 289. The sum of another 10 consecutive numbers, whose first term is 5 more than the average of the first set of consecutive numbers, is:

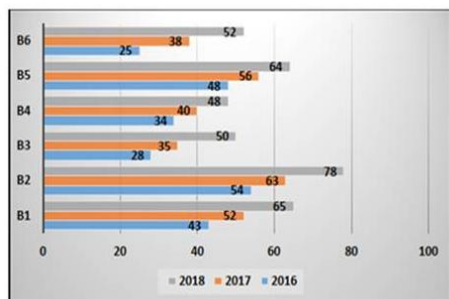
- Ans
- ✗ 1. 300
 - ✗ 2. 285
 - ✓ 3. 265
 - ✗ 4. 315

Question ID : 424429560

Status : Not Answered

Chosen Option : --

Q.25 The following graph shows the data of the collection of interest on loans (in crore ₹) by six branches B1, B2, B3, B4, B5 and B6 of a bank during the years mentioned.



Based on the information, from the year 2016 to 2017, the highest rate of collection is for the branch:

- Ans**
- ☒ 1. B4
 - ☒ 2. B6
 - ☒ 3. B3
 - ☒ 4. B1

Question ID : 424429578

Status : Not Answered

Chosen Option : --