DDA
ASO

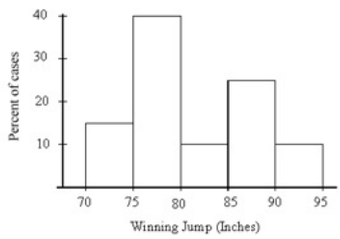
Previous Year Paper
17 Jul, 2019 Shift 1

Delhi Development Authority
(Recruitment Cell)
Advertisement No. 01/2019/Rectt. Cell. /Pers./DDA
Applications are invited from eligible candidates as per criteria mentioned in the said advertisement for filling up the various post including backlog vacancies & vacancies reserved for Persons with Disabilities

Roll No.	
Participant Name	
Test Center Name	
Test Date	17/07/2019
Test Time	9:00 AM - 11:00 AM
Subject	Assistant Section Officer

Section : **Quantitative Abilities**

Q.1 Given below is a histogram of the gold medal winning high jumps at the Olympic Games.



The mean of this histogram is approximately:

Ans
✗ 1. 90 inches
✗ 2. 75 inches
✓ 3. 77.5 inches
✗ 4. 82 inches

Question ID : **7230535119**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.2 Which of the following is NOT a frequency graph?

Ans
✓ 1. Bar diagrams
✗ 2. Frequency polygon
✗ 3. Ogive
✗ 4. Frequency curve

Question ID : **7230535122**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.3 The height of an equilateral triangle is 10 m. What is its area?

Ans
✗ 1. 100/3 sq m
✗ 2. 30 sq m

✗ 3. 100 sq m

✓ 4. 100/√3 sq m

Question ID : **7230535082**
Status : **Answered**
Chosen Option : **4**

Q.4 The base and another side of an isosceles triangle are 10 cm and 13 cm, respectively. Its area is:

Ans

✗ 1. 55 sq cm

✗ 2. 45 sq cm

✗ 3. 58 sq cm

✓ 4. 60 sq cm

Question ID : **7230535074**
Status : **Answered**
Chosen Option : **4**

Q.5 Two vessels contain spirit and water mixed respectively in the ratios 3 : 1 and 5 : 3. Find the ratio in which these are to be mixed to get a new mixture in which the ratio of spirit to water is 2 : 1.

Ans

✓ 1. 1 : 2

✗ 2. 2 : 3

✗ 3. 3 : 5

✗ 4. 3 : 2

Question ID : **7230535055**
Status : **Answered**
Chosen Option : **1**

Q.6 Solve the following:

$\frac{(0.4286)(0.6667)(0.7777)}{(0.2222)(1.6667)(0.7500)}$ is approximately equal to:

Ans

✗ 1. 1.25

✗ 2. 0.65

✗ 3. 0.75

✓ 4. 0.80

Question ID : **7230535034**
Status : **Marked For Review**
Chosen Option : **2**

Q.7 The average speed of a train in the onward journey is 25% more than that in the return journey. The train halts for one hour on reaching the destination. The total time taken for the complete to and fro journey is 17 hours, with the train covering a distance of 800 km. The speed of the train in the onward journey is:

Ans

✗ 1. 47.5 km/h

✗ 2. 42.25 km/h

✗ 3. 52.75 km/h

✓ 4. 56.25 km/h

Question ID : **7230535059**
Status : **Not Answered**
Chosen Option : **--**

Q.8 An isosceles triangle ABC is inscribed in a circle $x^2 + y^2 = a^2$ with the vertex A at (a, 0) and the base angles B and C each equal to 75°. What is the length of the base BC?

Ans
✔ 1. a
✘ 2. $2a/\sqrt{3}$
✘ 3. $\sqrt{3}$ a/2
✘ 4. a/2

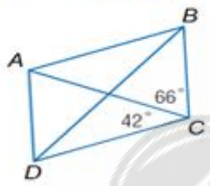
Question ID : **7230535077**
Status : **Answered**
Chosen Option : **1**

Q.9 How much water must be added to 76 litres of milk (being sold at 1.5 litres for ₹ 51) so as to have a mixture worth ₹ $25\frac{1}{3}$ a litre?

Ans
✘ 1. 28 litres
✔ 2. 26 litres
✘ 3. 21 litres
✘ 4. 24 litres

Question ID : **7230535056**
Status : **Answered**
Chosen Option : **2**

Q.10 निम्न समानांतर चतुर्भुज $ABCD$ पर विचार करें:



$m\angle ABC$ ज्ञात करें

Ans
✘ 1. 66°
✔ 2. 72°
✘ 3. 42°
✘ 4. 108°

Question ID : **7230535107**
Status : **Answered**
Chosen Option : **2**

Q.11 Kanan is 25% as efficient as Akshay. Karina does half of the work done by Kanan and Akshay together. If Karina alone does the work in 30 days, then Kanan, Akshay and Karina together can do the work in:

Ans
✘ 1. 16(2/7) days
✘ 2. 18(2/7) days

✗ 3. 17(2/7) days

✓ 4. 19(2/7) days

Question ID : **7230535061**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.12 The angles of depression and elevation of the top of a wall 11 m high from top and bottom of a tree are 60° and 30°, respectively. What is the height of the tree?

Ans

✓ 1. 44 m

✗ 2. 22 m

✗ 3. 11 m

✗ 4. 33 m

Question ID : **7230535113**
Status : **Answered**
Chosen Option : **1**

Q.13 The average weight of 28 boys in a class is 45.50 kg and that of the remaining 12 boys is 48.25 kg. What is the average weight of all the boys in the class?

Ans

✓ 1. 46.33 kg

✗ 2. 35.58 kg

✗ 3. 38.94 kg

✗ 4. 42.62 kg

Question ID : **7230535041**
Status : **Answered**
Chosen Option : **1**

Q.14 The number of common tangents to the circles $x^2 + y^2 = 4$ and $x^2 + y^2 - 6x - 8y = 24$ is:

Ans

✗ 1. 4

✗ 2. 3

✓ 3. 1

✗ 4. 0

Question ID : **7230535098**
Status : **Answered**
Chosen Option : **4**

Q.15 Ashish is twice as fast as Bonny, and Bonny is thrice as fast as Carol. The journey covered by Carol in 54 minutes will be covered by Bonny in:

Ans

✗ 1. 9 min

✗ 2. 27 min

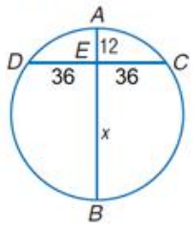
✓ 3. 18 min

✗ 4. 38 min

Question ID : **7230535060**

Status : **Answered**
Chosen Option : **3**

Q.16 In the following figure, find the value of x (that is the length of EB).



Ans
1. 24 ✗
2. 36 ✗
3. 108 ✓
4. 72 ✗

Question ID : **7230535085**
Status : **Answered**
Chosen Option : **4**

Q.17 If $(49^{49} + 49)$ is divided by 50, then the remainder will be:

Ans
1. 48 ✓
2. 49 ✗
3. 52 ✗
4. 46 ✗

Question ID : **7230535028**
Status : **Answered**
Chosen Option : **1**

Q.18 Astha and Brijesh are partners in a business. Astha contributed 0.25% of the capital for 15 months and Brijesh received $2/3^{rd}$ of the profit. For how many months was Brijesh's money used?

Ans
1. 6 months ✗
2. 10 months ✓
3. 9 months ✗
4. 12 months ✗

Question ID : **7230535054**
Status : **Not Answered**
Chosen Option : **--**

Q.19 48 bananas were purchased at the rate of ₹ 288 and sold at the rate of ₹ 78 per dozen. What is the percentage of profit or loss?

Ans
1. 8(1/6)% loss ✗
2. 8(1/3)% profit ✓
3. 7(1/4)% loss ✗
4. 7(2/3)% profit ✗

Question ID : **7230535048**
Status : **Answered**
Chosen Option : **2**

Q.20 The x -intercept and the y -intercept of the equation $3x - 4y + 12 = 0$ are of the form:

Ans

✗ 1. x -intercept is 4, y -intercept is 3

✗ 2. x -intercept is –3, y -intercept is 4

✗ 3. x -intercept is 3, y -intercept is 4

✓ 4. x -intercept is –4, y -intercept is 3

Question ID : **7230535070**
Status : **Answered**
Chosen Option : **4**

Q.21 From a point in the interior of an equilateral triangle, the perpendicular distance of the sides are $\sqrt{3}$ m, $2\sqrt{3}$ m and $5\sqrt{3}$ m. The perimeter of the triangle is:

Ans

✗ 1. 64 m

✗ 2. 32 m

✗ 3. 24 m

✓ 4. 48 m

Question ID : **7230535081**
Status : **Not Answered**
Chosen Option : **--**

Q.22 One diagonal of a parallelogram is 70 cm and the perpendicular distance of this diagonal from either of the lying vertices is 27 cm. The area of the parallelogram is:

Ans

✗ 1. 1980 sq cm

✓ 2. 1890 sq cm

✗ 3. 1800 sq cm

✗ 4. 1836 sq cm

Question ID : **7230535109**
Status : **Answered**
Chosen Option : **2**

Q.23 A circle is given by $x^2 + y^2 + 4x - 7y + 12 = 0$. The points P(0,0) and Q(–2,4) are such that:

Ans

✓ 1. Q lies inside and P lies outside the circle

✗ 2. both, P and Q lie inside the circle

✗ 3. P lies on the circle and Q is outside the circle

✗ 4. both, P and Q lie outside the circle

Question ID : **7230535096**
Status : **Answered**
Chosen Option : **1**

Q.24 The average of fifteen numbers is x and the average of five of these numbers is y. If the average of the remaining ten is z, then:

Ans

✗ 1. $x = 3y + 2z$

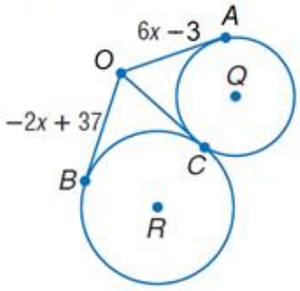
✗ 2. $3x = 2y + z$

✗ 3. $3x = 2y + z$

✓ 4. $3x = y + 2z$

Question ID : **7230535043**
Status : **Answered**
Chosen Option : **4**

Q.25 Consider the following figure:



The value of x is:

Ans

✓ 1. 5

✗ 2. 6

✗ 3. 4

✗ 4. 3

Question ID : **7230535089**
Status : **Answered**
Chosen Option : **1**

Q.26 Two persons are on either sides of a tower of height 50 m. The persons observe the top of the tower at an angle of elevation of 30° and 60°. If a car crosses these two persons in 10 seconds, then what is the speed of the car?

Ans

✗ 1. $24/\sqrt{3}$ km/h

✗ 2. $6\sqrt{3}$ km/h

✗ 3. $42\sqrt{3}$ km/h

✓ 4. $24\sqrt{3}$ km/h

Question ID : **7230535114**
Status : **Answered**
Chosen Option : **4**

Q.27 The average monthly income of Ashish and Amit is ₹ 6050. The average monthly income of Amit and Chandan is ₹ 7250 and the average monthly income of Ashish and Chandan is ₹ 6200. What is the monthly income earned by Ashish?

Ans

✓ 1. ₹ 5000

✗ 2. ₹ 2000

✗ 3. ₹ 4000

✗ 4. ₹ 3000

Question ID : **7230535040**
Status : **Answered**
Chosen Option : **1**

Q.28 The coordinates of the radical centre of the three circles $x^2 + y^2 = 9, x^2 + y^2 - 2x - 2y = 5$ and $x^2 + y^2 + 4x + 6y = 19$ are:

Ans

✗ 1. $(1, -1)$

✗ 2. $(-1, 1)$

✓ 3. $(1, 1)$

✗ 4. $(-1, -1)$

Question ID : **7230535095**
Status : **Not Answered**
Chosen Option : **--**

Q.29 Four computers and three printers together cost ₹ 94,000, while six computers and eight printers together cost ₹ 1,62,000. The cost (in ₹) of a computer and a printer are respectively:

Ans

✓ 1. 19,000 and 6000

✗ 2. 18,000 and 7000

✗ 3. 20,000 and 5000

✗ 4. 21,000 and 4000

Question ID : **7230535072**
Status : **Answered**
Chosen Option : **1**

Q.30 A sum of money lent at compound interest for two years at 20% per annum would fetch ₹ 482 more if the interest was payable half-yearly than if it was payable annually. The sum of money is:

Ans

✗ 1. ₹ 10,000

✗ 2. ₹ 15,000

✓ 3. ₹ 20,000

✗ 4. ₹ 25,000

Question ID : **7230535046**
Status : **Answered**
Chosen Option : **3**

Q.31 Peter and Quill need 8 days to complete a work. Quill and Ryan need 12 days to complete the same work. But Peter, Quill and Ryan together can finish it in 6 days. How many days will be needed if Peter and Ryan together do it?

Ans

✗ 1. 6 days

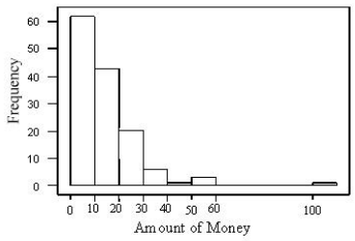
✗ 2. 4 days

✓ 3. 8 days

✗ 4. 12 days

Question ID : **7230535062**
Status : **Answered**
Chosen Option : **3**

Q.32 In a statistics class with 136 students, the professor records how much money each student has in his/her possession during the first class of the semester. The histogram below is of the data collected.



The number of students with over $30 in their possession is:

Ans
✔ 1. about 10
✘ 2. about 30
✘ 3. less than 5
✘ 4. more than 100

Question ID : **7230535120**
Status : **Answered**
Chosen Option : **1**

Q.33 What is the least perfect square that is divisible by each of 13, 32 and 104?

Ans
✘ 1. 10618
✘ 2. 10642
✘ 3. 10786
✔ 4. 10816

Question ID : **7230535038**
Status : **Answered**
Chosen Option : **4**

Q.34 The perimeter of a triangle with integer sides is equal to 19. How many such triangles are possible?

Ans
✘ 1. 9
✔ 2. 8
✘ 3. 6
✘ 4. 7

Question ID : **7230535079**
Status : **Not Answered**
Chosen Option : **--**

Q.35 Solve the following:

$$\frac{0.2\times0.2\times0.2+0.03\times0.03\times0.03}{0.6\times0.6\times0.6+0.09\times0.09\times0.09} = ?$$

Ans
✘ 1. 1/25

2. 1/28

3. 1/27

4. 1/32

Question ID : **7230535032**
Status : **Answered**
Chosen Option : **3**

Q.36 If $x^2 - \frac{1}{x^2} + 6 = 0$, then the value of the expression $x^6 - 3x^2 + \frac{3}{x^2} - \frac{1}{x^6}$ is:

Ans

1. -216

2. 18

3. 0

4. -1

Question ID : **7230535068**
Status : **Answered**
Chosen Option : **1**

Q.37 If the number 481k673 is completely divisible by 9, then what is the smallest whole number that will replace k?

Ans

1. 5

2. 3

3. 7

4. 9

Question ID : **7230535026**
Status : **Answered**
Chosen Option : **3**

Q.38 If two or more interrelated series of data are depicted by a bar diagram, then such a diagram is known as:

Ans

1. Sub-divided Bar Diagram

2. Percentage Bar Diagram

3. Multiple Bar Diagram

4. Simple Bar Diagram

Question ID : **7230535123**
Status : **Answered**
Chosen Option : **3**

Q.39 If 'a' is a positive integer and if $(a^{32} + 1)$ is completely divisible by a whole number, then which of the following numbers will be completely divisible by this number?

Ans

1. $(7 \times a^{23})$

2. $(a^{96} + 1)$

3. $(a^{16} - 1)$

4. $(a^{16} + 1)$

Question ID : **7230535027**
Status : **Answered**
Chosen Option : **2**

Q.40 Which of the following is NOT true in the case of a Histogram?

Ans

✔ 1. A histogram represents categorical data.

✘ 2. There are no spaces between bars.

✘ 3. A histogram represents quantitative data.

✘ 4. The width of a histogram may vary.

Question ID : **7230535117**
Status : **Not Answered**
Chosen Option : **--**

Q.41 Histogram can be used directly for:

Ans

✔ 1. continuous data

✘ 2. discrete data

✘ 3. primary data

✘ 4. secondary data

Question ID : **7230535115**
Status : **Answered**
Chosen Option : **1**

Q.42 The profit earned by a shop is 280% of the cost of the goods sold by it. If the cost increases by 15% but the selling price remains constant, find out approximately what percentage of the selling price is the profit.

Ans

✘ 1. 67.42%

✘ 2. 65.25%

✘ 3. 64.58%

✔ 4. 69.74%

Question ID : **7230535047**
Status : **Answered**
Chosen Option : **4**

Q.43 The expression $(15.76 \times 15.76 + 15.76 \times p + 0.24 \times 0.24)$ will be a perfect square for p equal to:

Ans

✔ 1. 0.48

✘ 2. 0.46

✘ 3. 0.42

✘ 4. 0.44

Question ID : **7230535031**
Status : **Answered**
Chosen Option : **1**

Q.44

The average weight of the students in four sections A, B, C and D is 60 kg. The average weight of the students of A, B, C and D individually are 45 kg, 50 kg, 72 kg and 80 kg, respectively. If the average weight of the students of section A and B together is 48 kg and that of B and C together is 60 kg, then the ratio of the number of students in sections A and D is:

Ans
1. 3 : 4
2. 3 : 5
3. 4 : 3
4. 5 : 2

Question ID : **7230535044**
Status : **Not Answered**
Chosen Option : **--**

Q.45 Which of the following is NOT a rule that is observed in drawing diagrams?

Ans
1. The scale should not be mentioned in the diagram.
2. Index must be given for identification.
3. Footnote must be given at the bottom of the diagram.
4. Every diagram must have a suitable but short heading.

Question ID : **7230535121**
Status : **Answered**
Chosen Option : **1**

Q.46 Triangle ABC has angles A = 60° and B = 70°. The incenter of this triangle is at I. Then the angle BIC is:

Ans
1. 80°
2. 120°
3. 130°
4. 90°

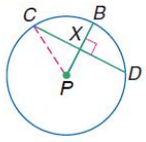
Question ID : **7230535101**
Status : **Answered**
Chosen Option : **2**

Q.47 Which of the following statements is INCORRECT?

Ans
1. The frequency polygon shows more vividly an outline of the data pattern.
2. The frequency polygon is not simpler as compared to its histogram.
3. A histogram can be easily transformed into a frequency polygon by joining the mid-points of the rectangles with straight lines.
4. As the number of classes and the number of observations increase, the frequency polygon becomes increasingly smooth.

Question ID : **7230535118**
Status : **Not Answered**
Chosen Option : **--**

Q.48 In the following figure, the radius of the circle is 13 inches. Radius $\overline{PB}$ is perpendicular to chord $\overline{CD}$, which is 24 inches long.



What is the length of PX?

Ans

✗ 1. 12

✗ 2. 9

✗ 3. 13

✓ 4. 5

Question ID : **7230535093**
Status : **Answered**
Chosen Option : **4**

Q.49 The price of commodity P increases by ₹ 65 every year, while the price of commodity Q increases by ₹ 45 every year. If in 1995, the price of commodity P was ₹ 535 and that of Q was ₹ 930, in which year will commodity P cost ₹ 65 more than commodity Q?

Ans

✗ 1. 2014

✗ 2. 2015

✓ 3. 2018

✗ 4. 2005

Question ID : **7230535035**
Status : **Answered**
Chosen Option : **3**

Q.50 A man sells two flats at the rate of ₹ 1.995 lakhs each. On one, he gains 5% and on the other, he loses 5%. His gain or loss percent in the whole transaction is:

Ans

✗ 1. 2.5% loss

✗ 2. 25% loss

✓ 3. 0.25% loss

✗ 4. 0.25% gain

Question ID : **7230535049**
Status : **Answered**
Chosen Option : **3**

Q.51 In a right-angled triangle, the lengths of two legs are 12 cm and 5 cm, respectively. What is the length of the hypotenuse?

Ans

✗ 1. 14 cm

✗ 2. 16 cm

✗ 3. 15 cm

✓ 4. 13 cm

Question ID : **7230535104**
Status : **Answered**
Chosen Option : **4**

Q.52 If the middle point of the upper boundaries of the rectangles of a histogram is corrected by a smooth free hand curve, then that diagram is called:

Ans

✔ 1. Frequency Curve

✘ 2. Lorenz Curve

✘ 3. Ogive

✘ 4. Frequency Polygon

Question ID : **7230535116**
Status : **Not Answered**
Chosen Option : **--**

Q.53 The length of the common chord of the circles $(x-1)^2+(y+1)^2=c^2$ and $(x+1)^2+(y-1)^2=c^2$ is:

Ans

✘ 1. $(c+2))$

✘ 2. $\frac{1}{2}\sqrt{(c^2-2)}$

✘ 3. $\sqrt{(c^2-2)}$

✔ 4. $2\sqrt{(c^2-2)}$

Question ID : **7230535091**
Status : **Answered**
Chosen Option : **4**

Q.54 An aeroplane leaves an airport and flies due north at a speed of 1200 km/h. At the same time, another aeroplane leaves the same airport and flies due west at a speed of 1800 km/h. What is the distance between the two planes after 1 hour and 30 minutes?

Ans

✘ 1. 3250 km

✘ 2. 3425 km

✔ 3. 3245 km

✘ 4. 3645 km

Question ID : **7230535078**
Status : **Answered**
Chosen Option : **1**

Q.55 The diagonal of a rectangle is 10 cm and it is twice the length of one of the sides. What is the area of the rectangle?

Ans

✘ 1. $25\ \text{cm}^2$

✘ 2. $20\sqrt{3}\ \text{cm}^2$

✔ 3. $25\sqrt{3}\ \text{cm}^2$

✘ 4. $\frac{25}{\sqrt{3}}\ \text{cm}^2$

Question ID : **7230535110**
Status : **Answered**
Chosen Option : **3**

Q.56 The area of a right-angled triangle is 40 times its base. What is its height?

Ans
1. 50 cm
2. 80 cm
3. 45 cm
4. 60 cm

Question ID : **7230535103**
Status : **Answered**
Chosen Option : **2**

Q.57 The locus of a point which moves such that the tangents from it to the two circles $x^2 + y^2 - 5x - 3 = 0$ and $3x^2 + 3y^2 + 2x + 4y - 6 = 0$ are equal, is:

Ans
1. $3x - 4y = -9$
2. $17x + 4y = -3$
3. $13x - 4y = 15$
4. $7x + 4y = 3$

Question ID : **7230535087**
Status : **Answered**
Chosen Option : **4**

Q.58 The units digit in $(6342)^{1797} \times (617)^{316} \times (345)^{476}$ is:

Ans
1. 2
2. 0
3. 1
4. 3

Question ID : **7230535029**
Status : **Answered**
Chosen Option : **2**

Q.59 A fan is listed at ₹ 1500 and a discount of 20% is offered on the list price. How much additional discount must be offered to the customer to bring the net price to ₹ 1104?

Ans
1. 12%
2. 15%
3. 8%
4. 10%

Question ID : **7230535050**
Status : **Answered**
Chosen Option : **3**

Q.60 If $2x + 3y = 5$ and $xy = 1/18$, then $8x^3 + 27y^3$ equals:

Ans
1. 90
2. 130
3. 120
4. 110

Question ID : **7230535069**
Status : **Answered**
Chosen Option : **3**

Q.61 The difference between simple and compound interests compounded annually on a certain sum of money for two years at 4% per annum is ₹ 1. The sum is:

Ans
✗ 1. ₹ 600
✓ 2. ₹ 625
✗ 3. ₹ 645
✗ 4. ₹ 525

Question ID : **7230535045**
Status : **Answered**
Chosen Option : **2**

Q.62 The circumference of a circle is 100 cm. The side of a square inscribed in the circle is:

Ans
✗ 1. $100/\pi$ cm
✗ 2. $\frac{1}{\pi}100\sqrt{2}$ cm
✗ 3. $50\sqrt{2}$ cm
✓ 4. $\frac{1}{\pi}50\sqrt{2}$ cm

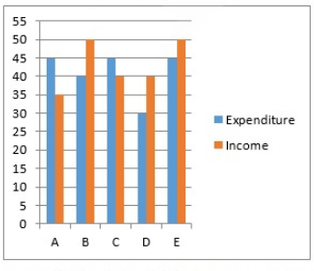
Question ID : **7230535106**
Status : **Answered**
Chosen Option : **4**

Q.63 If $x = \frac{\sqrt{3}+1}{\sqrt{3}-1}$ and $y = \frac{\sqrt{3}-1}{\sqrt{3}+1}$, then what is the value of $x^2 + y^2$?

Ans
✗ 1. 15
✗ 2. 13
✗ 3. 10
✓ 4. 14

Question ID : **7230535039**
Status : **Answered**
Chosen Option : **4**

Q.64 The following bar graph shows the income and expenditures (in ₹ lakhs) of five companies in the year 2018:



Among following which company earned the maximum percentage of profit in the year 2018?

Ans
✗ 1. B

2. C
3. A
4. E

Question ID : **7230535125**
Status : **Answered**
Chosen Option : **1**

Q.65 In an isosceles right-angled triangle, the length of one leg is 10cm. What is its area?

Ans
1. $40\ cm^2$
2. $50\ cm^2$
3. $55\ cm^2$
4. $45\ cm^2$

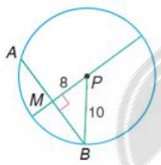
Question ID : **7230535102**
Status : **Answered**
Chosen Option : **2**

Q.66 A student needed to find the arithmetic mean of the numbers 7, 15, 11, 13, 19, 17, 12, 23, 21, 25, 18 and x. He found the mean to be 16. What is the value of x?

Ans
1. 15
2. 11
3. 13
4. 17

Question ID : **7230535042**
Status : **Answered**
Chosen Option : **2**

Q.67 In the following figure, if $\overline{PM}$ is perpendicular to $\overline{AT}$, $PB = 10$, and $PM = 8$, then AB equals:



Ans
1. 12
2. 10
3. 6
4. 36

Question ID : **7230535084**
Status : **Answered**
Chosen Option : **1**

Q.68 A circle with center O and radius 25 cms has a chord AB of length 14 cms in it. What is the area of triangle AOB?

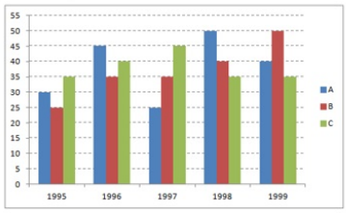
Ans
1. $144\ cm^2$
2. $168\ cm^2$

✗ 3. $121\ cm^2$

✗ 4. $156\ cm^2$

Question ID : **7230535083**
Status : **Answered**
Chosen Option : **2**

Q.69 The following bar diagram shows the production of papers (in lakh tonnes) by three different companies A , B and C over the years:



What is the difference between the production of Company C in 1997 and Company B in 1995?

Ans

✗ 1. 2000 tonnes

✗ 2. 2,00,000 tonnes

✓ 3. 20,00,000 tonnes

✗ 4. 20,000 tonnes

Question ID : **7230535124**
Status : **Answered**
Chosen Option : **3**

Q.70 A line is drawn through the point P (3, 11) to cut the circle $x^2 + y^2 = 3^2$ at A and B. Then PA.PB equals:

Ans

✓ 1. 121

✗ 2. 205

✗ 3. 9

✗ 4. 139

Question ID : **7230535092**
Status : **Answered**
Chosen Option : **1**

Q.71 What is the distance between the orthocenter and the circumcenter of a triangle whose sides measure 24 cm, 26 cm and 10 cm?

Ans

✓ 1. 13 cm

✗ 2. 12 cm

✗ 3. 14 cm

✗ 4. 10 cm

Question ID : **7230535076**
Status : **Answered**
Chosen Option : **1**

Q.72 On an E-commerce website, when payment is made online, discount offered is 10%. An additional discount of 5% is given to SBI credit card holders. Prabhu buys a phone for ₹ 15,000 by paying online and pays through his SBI credit card. How much does he need to pay?

Ans

1. ₹ 15,000
2. ₹ 13,500
3. ₹ 12,825
4. ₹ 12,750

Question ID : **7230535052**
Status : **Answered**
Chosen Option : **4**

Q.73 How many natural numbers are there between 62 and 245 that are exactly divisible by 8?

Ans
1. 26
2. 23
3. 22
4. 24

Question ID : **7230535030**
Status : **Answered**
Chosen Option : **3**

Q.74 When the sun's altitude changes from 30° to 60°, the length of the shadow of a tower decreases by 70 m. What is the height of the tower? (Given $\sqrt{3} = 1.73$)

Ans
1. 20.2 m
2. 35.0 m
3. 140.0 m
4. 60.6 m

Question ID : **7230535112**
Status : **Answered**
Chosen Option : **4**

Q.75 The radius of the wheel of a lorry is 70 cm and the speed of the lorry is 66 km/h. The revolutions per minute of the wheel are:

Ans
1. 300
2. 200
3. 250
4. 350

Question ID : **7230535094**
Status : **Marked For Review**
Chosen Option : **3**

Q.76 The length of a rectangle is 11 cm more than the breadth, and the perimeter is 6 times its breadth. Then the length of the rectangle is:

Ans
1. 21 cm
2. 18 cm
3. 23 cm
4. 22 cm

Question ID : **7230535066**
Status : **Answered**
Chosen Option : **4**

Q.77 Which of the following is a factor of $(2x+p-c)^2-(2x-p+c)^2$?

Ans

✗ 1. $x+p-c$

✗ 2. $x-p$

✗ 3. $x-p+c$

✓ 4. $8x(p-c)$

Question ID : **7230535064**
Status : **Answered**
Chosen Option : **4**

Q.78 A triangle ABC is inscribed in the circle $x^2+y^2=25$. If B and C have the coordinates (3, 4) and (–4, 3) respectively, then angle BAC is equal to:

Ans

✗ 1. $\pi/6$

✓ 2. $\pi/4$

✗ 3. $\pi/2$

✗ 4. $\pi/3$

Question ID : **7230535075**
Status : **Answered**
Chosen Option : **2**

Q.79 Two circles of radius 5 cm have a direct tangent PQ and an indirect tangent RS. Find the length of PQ if RS = 24 cm.

Ans

✗ 1. 29 cm

✗ 2. 32 cm

✓ 3. 26 cm

✗ 4. 13 cm

Question ID : **7230535097**
Status : **Answered**
Chosen Option : **3**

Q.80 There are two concentric circles of radii 10 cm and 8 cm, respectively. The length of the chord of the longer circle which touches the smaller circle is:

Ans

✓ 1. 12 cm

✗ 2. 8 cm

✗ 3. 6 cm

✗ 4. 10 cm

Question ID : **7230535099**
Status : **Answered**
Chosen Option : **1**

Q.81 If $x+y+z=20, x^2+y^2+z^2=33, xy+yz+zx=18$, then find the value of $x^3+y^3+z^3-3xyz$.

Ans

✗ 1. 294

2. 268
3. 300
4. 276

Question ID : **7230535067**
Status : **Answered**
Chosen Option : **3**

Q.82 The locus of the middle points of the chords of the circle $x^2 + y^2 = 9a^2$ which subtend a right angle at the centre of the circle is:

Ans
1. $x^2 + y^2 = a^2$
2. $x + y = 3a$
3. $x^2 + y^2 = (4.5)a^2$
4. $x^2 + y^2 = x + y$

Question ID : **7230535086**
Status : **Answered**
Chosen Option : **3**

Q.83 If $a = 0.2917$, then the value of $\sqrt{(4a^2 - 4a + 1)} + 3a$ is:

Ans
1. 0.5834
2. 2.2917
3. 1.2917
4. 0.2917

Question ID : **7230535037**
Status : **Answered**
Chosen Option : **1**

Q.84 In a quadrilateral ABCD, if $m\angle A = 2x$, $m\angle B = 40$, $m\angle C = 2x$, $m\angle D = 40$, then $m\angle C$ equals:

Ans
1. 120°
2. 100°
3. 160°
4. 140°

Question ID : **7230535105**
Status : **Answered**
Chosen Option : **4**

Q.85 The value of x so that the line passing through $(x, 6)$ and $(10, -3)$ has a slope of $-\frac{3}{2}$ is:

Ans
1. 3
2. 4
3. 2
4. 5

Question ID : **7230535071**

Status : **Answered**
Chosen Option : **2**

Q.86 An aeroplane flies along the four sides of a square field at speeds of 200, 400, 600 and 800 km/h. The average speed of the plane around the field is:

Ans
1. 376 km/h
2. 346 km/h
3. 362 km/h
4. 384 km/h

Question ID : **7230535057**
Status : **Answered**
Chosen Option : **4**

Q.87 The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 12.4 m away from the wall. The length of the ladder is:

Ans
1. 6.2 m
2. 14.8 m
3. 24.8 m
4. 12.4 m

Question ID : **7230535111**
Status : **Answered**
Chosen Option : **3**

Q.88 एक कैन की ऊंचाई 10 सेंटिमीटर और उसका आयतन 200 घन सेंटिमीटर है। एक अन्य कैन की ऊंचाई 12 सेंटिमीटर है। 675 घन सेंटिमीटर आयतन के लिए इसकी ऊंचाई कितनी होनी चाहिए?

Ans
1. 15 सेंटिमीटर
2. 11 सेंटिमीटर
3. 12 सेंटिमीटर
4. 14 सेंटिमीटर

Question ID : **7230535080**
Status : **Answered**
Chosen Option : **1**

Q.89 Ten years ago, a father was four times as old as his son. After 20 years, he will be twice as old as his son. The present ages of the father and the son are respectively:

Ans
1. 70 years, 25 years
2. 69 years, 26 years
3. 68 years, 27 years
4. 60 years, 35 years

Question ID : **7230535073**
Status : **Answered**
Chosen Option : **1**

Q.90

The difference between a positive fraction and its reciprocal is 9/20. Then the sum of that fraction and its reciprocal will be:

Ans
1. $\frac{41}{20}$
2. $\frac{11}{20}$
3. $\frac{7}{20}$
4. $\frac{9}{20}$

Question ID : **7230535036**
Status : **Answered**
Chosen Option : **1**

Q.91 Piku takes thrice as much time as Gita or twice as much time as Ranjan to finish a piece of work. They can finish the work in 5 days if they work together. How much time will Gita take to do the work alone?

Ans
1. 10 days
2. 14 days
3. 12 days
4. 8 days

Question ID : **7230535063**
Status : **Answered**
Chosen Option : **1**

Q.92 If $f(x) = x^3 - 18x^2 + 108x - 216$ is a third degree polynomial in x, then the value of $f(17)$ is:

Ans
1. 1331
2. 2962
3. 1313
4. 1311

Question ID : **7230535065**
Status : **Answered**
Chosen Option : **1**

Q.93 If the area of an equilateral triangle is $24\sqrt{3}$ sq cm, then its perimeter is:

Ans
1. $12\sqrt{6}$ cm
2. $\sqrt{154}$ cm
3. $2\sqrt{6}$ cm
4. $4\sqrt{6}$ cm

Question ID : **7230535100**
Status : **Answered**
Chosen Option : **1**

Q.94 Caytlin started a software business by investing ₹ 50,000. After six months, Mikayla joined her with a capital of ₹ 80,000. After three years, they earned a profit of ₹ 24,500. What was Caytlin's share in the profit?

Ans
1. ₹ 10,250
2. ₹ 12,050
3. ₹ 12,500
4. ₹ 10,500

Question ID : **7230535053**
Status : **Answered**
Chosen Option : **4**

Q.95 If the tangents AP and AQ from a point A to a circle with centre O are inclined to each other at an angle of 80°, then the angle of AOP equals:

Ans
1. 80 °
2. 70 °
3. 60 °
4. 50 °

Question ID : **7230535090**
Status : **Answered**
Chosen Option : **4**

Q.96 एक साइकिल चालक द्वारा एक निश्चित दूरी को एक निश्चित गति से तय किया जाता है। यदि एक पैदल चलने वाला इससे तिगुने समय में, दूरी का ¾ भाग कवर करता है तो पैदल चलने वाले की गति का साइकिल चालक की गति के साथ क्या अनुपात क्या होगा?

Ans
1. 12 : 1
2. 1 : 12
3. 7 : 6
4. 6 : 7

Question ID : **7230535058**
Status : **Not Answered**
Chosen Option : **--**

Q.97 The length of a rectangular field is thrice its breadth. If the perimeter of this field is 800 m, then what is the length of the field?

Ans
1. 400 m
2. 300 m
3. 320 m
4. 280 m

Question ID : **7230535108**
Status : **Answered**
Chosen Option : **2**

Q.98 If (532 / 0.532) = (53.2 / x), then the value of x is:

Ans
1. 53.2
2. 0.532
3. 532

✔ 4. 0.0532

Question ID : **7230535033**
Status : **Answered**
Chosen Option : **4**

Q.99 Two tangents are drawn from the origin to a circle with centre at (2, –1). If the equation of one of the tangents is $3x + y = 0$, then the equation of the other tangent is:

Ans

✔ 1. $x - 3y = 0$

✘ 2. $x + 3y = 0$

✘ 3. $3x - y = 0$

✘ 4. $x + 2y = 0$

Question ID : **7230535088**
Status : **Answered**
Chosen Option : **1**

Q.100 Catherine could not decide between a discount of 50% or two successive discounts of 35% and 15%, both given on shopping for products worth ₹ 5000. What is the difference between both the discounts?

Ans

✔ 1. ₹ 262.50

✘ 2. ₹ 248.50

✘ 3. ₹ 258.50

✘ 4. ₹ 264.50

Question ID : **7230535051**
Status : **Answered**
Chosen Option : **1**