Question Number : 1  Question Id : 47163915055  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

The sum of all the remainders, which can be obtained when cube of a natural number is divided by 9, is:

Options :

4. ✓ 9
On selling 82 oranges a fruit seller gains the selling price of 7 oranges. His gain percent is:
Options:

\[ \frac{7}{3} \]

Question Number : 3  Question Id : 47163915057  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

Which least number should be added to 7560 so that the sum becomes a perfect Square?
Options:
2  9

Question Number : 4  Question Id : 47163915058  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

What is the least number which when divided by 20, 25, 35 and 40 leaves respectively 13, 18, 28 and 33 as remainders?
Options:
2  1393

Question Number : 5  Question Id : 47163915059  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

A can do a piece of work in 8 hours. B and C together can do in 6 hours. A and C together do it in 4 hours. How long time B will take to do it alone?
Options:
3  24 hours

Question Number : 6  Question Id : 47163915060  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

A certain sum becomes 5 times at 10% simple interest per year. At what yearly rate of interest it can become 7 times in the same time?
Options:
2  15%

Question Number : 7  Question Id : 47163915061  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
A person incurs 20% loss by selling an article for Rs 430. At what price must he sell to earn 20% profit?

Options:

4. ✅ Rs 720

A train of length 110m is moving with speed of 36 km/h. The time taken by the train to cross a bridge of length 132 m is:

Options:

2. ✅ 24.2 second

The sale price of an article including GST is Rs 649. The rate of GST is 18%. If the shop keeper has made a profit of 10%, then the cost price of the article is:

Options:

3. ✅ Rs 500

A contractor undertook to do a piece of work in 40 days. He engages 100 men at the beginning and 100 more after 35 days and completed the work in stipulated time. Had he not engaged the additional men, how many days behind scheduled would it be finished?

Options:

1. ✅ 5

A sum of money is divided between A, B, C and D in such a way that A and B may get as 3:5, B and C as 6:7 and C and D as 8:9. The ratio, in which A and D get, is:

Options:
1. ✔ 16:35

Question Number : 12  Question Id : 47163915066  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If \( n \) is divided by 7, the remainder is 4. If \( 3n+1 \) will be divided by 7, the remainder will be:

Options :

4. ✔ 6

Question Number : 13  Question Id : 47163915067  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The least number, which is divisible by all natural numbers from 1 to 10, is:

Options :

1. ✔ 2520

Question Number : 14  Question Id : 47163915068  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The greatest number, which when divides 764, 902 and 1178 leaves the same remainder, is:

Options :

3. ✔ 138

Question Number : 15  Question Id : 47163915069  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

A person takes ₹10,000 loan at the rate of 10% interest compounding yearly for a period of 4 years. How much interest has he to pay?

Options :

4. ✔ ₹ 4641

Question Number : 16  Question Id : 47163915070  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If LCM of 15, 25, 30 and \( x \) is 300, the minimum value of \( x \) is:

Options :

3. ✔ 4
Question Number : 17  Question Id : 47163915071  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
Which of the following is a rational number?
Options :
2. ✓ 2.37137137.....

Question Number : 18  Question Id : 47163915072  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
If \( \log_2 = 0.3010 \), then number of digits in \( 2^{30} \) is :
Options :
2. ✓ 10

Question Number : 19  Question Id : 47163915073  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
abc is a three digit number and 3 does not divide it. Then \( abc + bca + cab \) is not divisible by
Options :
4. ✓ 9

Question Number : 20  Question Id : 47163915074  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
If \( \log_2 = 0.3010 \), the value of \( \log 3125 \) is :
Options :
3. ✓ 3.4950

Question Number : 21  Question Id : 47163915075  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
If the number \( 56201xy4235 \) is divisible by 99, then \( x \) and \( y \) respectively are equal to :
Options :
3. ✓ 5 and 3

Question Number : 22  Question Id : 47163915076  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
What should be added to each of the numbers 12, 30 and 40, 86 so that they are in same proportion?

Options:

4 ✓ 6

Question Number : 23  Question Id : 47163915077  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The monthly incomes of A and B are in the ratio 4:5 and their monthly expenditures are in the ratio 7:9. If each saves ₹500 per month, the monthly income of A is:

Options:

1 ✓ ₹4000

Question Number : 24  Question Id : 47163915078  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If the polynomials $ax^3 - 7x^2 + 7x - 2$ and $x^3 - 2ax^2 + 8x - 8$ have the same remainder, when divided by $x - 2$, then the value of $a$ is:

Options:

3 ✓ 2

Question Number : 25  Question Id : 47163915079  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If $2x - \frac{1}{2x} = 6$, then the value of $4x^2 + \frac{1}{4x^2}$ is:

Options:

1 ✓ 38

Question Number : 26  Question Id : 47163915080  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If $X + 3Y = 9$, then the value of $(X - 5)^3 + (3Y - 4)^3$ is:

Options:

4 ✓ 0

Question Number : 27  Question Id : 47163915081  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33
If \( x + \frac{1}{x} = 5 \), the value of \( x^6 + \frac{1}{x^6} \) is:

Options:

2. \( \checkmark \) 12098

Question Number : 28  Question Id : 47163915082  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The values of x in the equation \( \frac{1}{x-3} - \frac{1}{x+5} = \frac{1}{6} \) are:

Options:

1. \( \checkmark \) 7, -9

Question Number : 29  Question Id : 47163915083  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

LCM and HCF of two numbers x and y are 3 and 105 respectively. If \( x + y = 36 \),
the value of \( \frac{1}{x} + \frac{1}{y} \) is:

Options:

4  
4. \( \checkmark \) 35

Question Number : 30  Question Id : 47163915084  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The age of a man is three times of the age of his son. After 5 years the double of father’s age will be five times the age of the son. The present ages of man and his son in years are respectively:

Options:

4  
4. \( \checkmark \) 45, 15

Question Number : 31  Question Id : 47163915085  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

Ritu can row downstream 20 km in 2 hours and upstream 4km in 2 hours. The speed of the Current in km/h is:

Options:
Question Number : 32  Question Id : 47163915086  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

There are three consecutive positive integers such that the sum of square of first and product of other two is 154. Then the largest number is:

Options:
3. ✓ 10

Question Number : 33  Question Id : 47163915087  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If $x+1$ and $x - 2$ are factors of $x^3 + ax^2 - bx - 6$, then the value of $4a+b$ is:

Options:
3. ✓ 13

Question Number : 34  Question Id : 47163915088  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If the perimeter of certain rectangle is 76m and its area is 360m², then its shorter side is of length:

Options:
3. ✓ 18m

Question Number : 35  Question Id : 47163915089  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

A fraction becomes $\frac{1}{2}$ on subtracting 1 from numerator and adding 2 to the denominator and reduces to $\frac{1}{3}$ on subtracting 7 from numerator and 2 from denominator. The fraction is:

Options:

\[
\begin{align*}
15 & \quad 4. ✓ \\
26 & 
\end{align*}
\]
If A, B and C are three sets, then A – (B – C) equal to:

Options :
1. ✓ \((A - B) \cup (A \cap C)\)

Question Number : 37  Question Id : 47163915091  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33  
If \(X = \{8^n - 7^n - 1 : n \text{ is a natural number}\}\) and \(Y = \{49(n - 1) : n \text{ is a natural number}\}\), then

Options :
1. ✓ \(X \subseteq Y\)

Question Number : 38  Question Id : 47163915092  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33  
In a survey of 600 students, 150 students were found to be taking tea and 225 taking coffee, 100 were taking both tea and coffee. How many students were neither taking tea or coffee?

Options :
3. ✓ 325

Question Number : 39  Question Id : 47163915093  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33  
The number of real solutions of the equation

\[ x - \frac{3}{x^2 - 9} = 3 - \frac{3}{x^2 - 9} \text{ is:} \]

Options :
1. ✓ 0

Question Number : 40  Question Id : 47163915094  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33  
A solution is to be kept between 68°F and 77°F. The range of temperature in degree Celsius (°C), if the celcius/fahrenheit conversion formula is \(F = \frac{9}{5}C + 32\), is between

Options :
2. ✓ 20°C and 25°C
The system of linear equations $2x+y=6$, $x+y=6$, $2x-y=3$ has

Options:
3. ✓ no solution

If $m$, $n$ are roots of the equation $x^2-3x+p=0$ and $m^3+n^3 = 81$ then $p$ is equal to

Options:
2. ✓ -6

The value of $(6^{-1} - 7^{-1})^{-1} - (2^{-1} - 3^{-1})^{-1}$ is:

Options:
2. ✓ 3

If $\cos \theta + \sin \theta = 2\sqrt{2}$, the value of $3 \sin \theta - \cos \theta$ is:

Options:
2. ✓ $\sqrt{2}$

If $\cos^2 \theta + \cos \theta = 1$, then $\sin^6 \theta + 1$ is equal to

Options:
2. ✓ 2 $\cos \theta$

The value of $\cos^{\frac{\pi}{6}} + \csc^{\frac{\pi}{6}} + 3 \tan^{\frac{\pi}{6}}$ is
The maximum value of $\cos x + 3 \sin x$ is

Options:

3. $\sqrt{13}$

If $\cos^4 \theta + \sin^2 \theta = m$, then

Options:

$$\frac{3}{4} \leq m \leq 1$$

3. $\sqrt{13}$

The value of $\cos^x - \sin^x$ ($0 \leq x < 45$) is

Options:

2. Positive

A vertical pole of height 10 m stands on one corner of a rectangular field. The angle of Elevation of its top from the farthest corner is 30° while that from another corner is 60°. The area in m² of rectangular field is

Options:

$$\frac{200}{3} \sqrt{2}$$

1. $\sqrt{13}$

The value of $\tan 1^\circ \tan 2^\circ \tan 3^\circ \ldots \tan 89^\circ$ is

Options:
2. ✔ 1

If \( \sin \theta + \cos \theta = \sqrt{3} \), then the value of \( \tan \theta + \cos \theta \) is

Options:

3. ✔ 1

If angles of elevation of the top of a tower from two points distant \( s \) and \( t \) from its foot are complementary. Then the height of tower is:

Options:

2. ✔ \( \sqrt{st} \)

4 Question Number : 54  Question Id : 47163915108  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

From an external point \( P \) tangents \( PA \) and \( PB \) are drawn to a circle with center \( O \). If \( CD \) is a tangent to the circle at a point \( E \) intersecting \( PA \) at \( C \) and \( PB \) at \( D \), also if \( PB = 16 \) cm, \( AC = 7 \) cm and \( CD = 12 \) cm, then the perimeter of the triangle \( PCD \) is

Options:

1. ✔ 32 cm

4 Question Number : 55  Question Id : 47163915109  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

A point is selected at random inside a rectangle and perpendiculars are drawn on each side of the rectangle from the point. If sum of these perpendiculars is 32 cm, the perimeter of the rectangle is:

Options:

2. ✔ 64 cm

4 Question Number : 56  Question Id : 47163915110  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33
In the triangle ABC, AB = AC, D and E are points on AC and AB so that AD = DE = EC = BC. Then \( \angle A \) is equal to

Options:

4. \( \frac{5\degree}{7} \)

Question Number : 57  Question Id : 47163915111  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
The angle subtended by a chord of a circle at the centre is 60°. The ratio between chord and diameter of the circle is:

Options:

2. 1:2

Question Number : 58  Question Id : 47163915112  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
D, E, F are respectively the mid points of sides BC, CA, AB of a triangle ABC. The ratio of the areas of triangle DEF and triangle ABC is:

Options:

3. 1:4

Question Number : 59  Question Id : 47163915113  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
The rain water from a roof 22m x 20m drains into a cylindrical vessel having base diameter 2m and height 3.5m. If the vessel is just full, the rainfall in cm is

(use \( \pi = \frac{22}{7} \))

Options:

2. 2.5

Question Number : 60  Question Id : 47163915114  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
If the diagonal of a rectangle is 3 times of its smaller side, then ratio of its sides is:

Options:

3. \( 2\sqrt{2} : 1 \)
The surface areas of two spheres are in the ratio 9:4. The ratio of their volumes is:

Options:
2 ✓ 27:8

In an equilateral triangle ABC, D is a point on side BC such that BD = \( \frac{1}{3} \) BC.

Then AD² : AB² is

Options:
3 ✓ 7:9

A Chord of length 14 cm is at a distance of 6 cm from the center of a circle. The length of another Chord at a distance 2 cm from the center is:

Options:
1 ✓ 18 cm

If one angle of a triangle is 130°, then the angle between bisectors of the other two angles will be

Options:
4 ✓ 155°

Three circles with centers A, B, C touch each other externally. If AB = 5 cm, BC = 7 cm and CA = 6 cm, then the radius of the circle with center A is:

Options:
2 ✓ 2.0 cm
In triangle ABC, AB = 9 cm, BC = 40 cm and CA = 41 cm, then the triangle is

Options:
1. ✓ Right angled

The angle between the hands of a clock at 3:40 would be

Options:
1. ✓ 130°

If the radius of a circle is increased by 25%, then its area will increase by

Options:
4. ✓ 56.25%

In the figure MN > NO, which of the following is not true?

Options:
3. ✓ X = Y+Z
From a point in the interior of an equilateral triangle, the perpendicular distances of the sides are $\sqrt{3} \text{cm}, 2\sqrt{3} \text{cm}$ and $5\sqrt{3} \text{cm}$. The perimeter of the triangle is:

Options:
2. $48 \text{ cm}$

Question Number : 71  Question Id : 47163915125  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

In a circle of radius 5 cm, if AB and AC are two equal chords of length 6 cm each, then the length of BC is

Options:
4. $\frac{48}{5} \text{ cm}$

Question Number : 72  Question Id : 47163915126  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

ABCD is a trapezium in which AB is parallel to DC. If AC, BD interest at O, area of $\Delta AOD = 4 \text{ cm}^2$ and area of $\Delta BCD = 7 \text{ cm}^2$, then area of $\Delta CDO$ is

Options:
4. $3 \text{ cm}^2$

Question Number : 73  Question Id : 47163915127  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

In a parallelogram ABCD, AB = 12 cm, BC=14 cm and BD = 20 cm then AC is equal to:

Options:
4. $2\sqrt{70} \text{ cm}$

Question Number : 74  Question Id : 47163915128  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33

If area of a square inscribed in a semicircle is $2 \text{ cm}^2$ then the area of the square inscribed in the full circle of same radius is:

Options:
1. $5 \text{ cm}^2$
Question Number : 75  Question Id : 47163915129  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

A circle C is inscribed in a square S. An equilateral triangle T is drawn inside C with its Vertices on C. If the area of S is k times the area of T, then k is equal to:

Options :

\[ \frac{16}{3\sqrt{3}} \]

1. ✓

Question Number : 76  Question Id : 47163915130  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

In the right triangle ABC, D is midpoint of the diagonal AC and \(< BCD = 40^\circ) ,

Then < BDA is equal to:

Options :

4. ✓ 80°

Question Number : 77  Question Id : 47163915131  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

Internal angle bisectors of a parallelogram enclose a

Options :

2. ✓ Rectangle

Question Number : 78  Question Id : 47163915132  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

Three sides of an isosceles triangle are represented by x – 1, 9 – x and 5x – 3.

How many such triangles are possible?

Options :

2. ✓ 1

Question Number : 79  Question Id : 47163915133  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The length of canvas 1.1m wide, required to build a conical tent of height 14m and

floor Area 346.5 m² is (Use \( \pi = \frac{22}{7} \)).

Options :
2. ✓ 525 m

A solid cylinder with radius 7 cm has total surface area 440 cm². Height of the cylinder is (Use $\pi=\frac{22}{7}$)

Options:

2. ✓ 3 cm

Question Number : 81  Question Id : 47163915135  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

Which triangle with its sides given below is not possible?

Options:

4. ✓ 6, 7, 9

Question Number : 82  Question Id : 47163915136  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If each side of a cube is reduced by 10%, its volume will be decreased by:

Options:

1. ✓ 27.1%

Question Number : 83  Question Id : 47163915137  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

The surface of water in a swimming pool when it is full of water, is rectangular of dimension 36 m x 10.5 m. The depth of water increases uniformly from 1 m to 1.75 m from one end to another end. The water in the pool is emptied by a cylindrical pipe of radius 7 cm at the rate of 5 km/h. The time to empty water in pool is (Use $\pi=\frac{22}{7}$)

Options:

3. ✓ $\frac{6}{4}$ hrs
A milk container of height 16 cm is made of metal sheet in the form of frustum of a cone with radii of its lower and upper ends as 10 cm and 20 cm respectively. The cost of milk at the rate of ₹ 60 per liter which the container can hold, is \( \text{Use } \pi = \frac{22}{7} \) 

Options:
1. ₹ 704

Question Number : 85  Question Id : 47163915139  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33
There is no spacing between the bars of a

Options:
1. ✔ Histogram

Question Number : 86  Question Id : 47163915140  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33
The median of 11 observations is 50. If one of the observations 25 is replaced by 48, the median of the new set of observations will be increased by

Options:
3. ✔ 0

Question Number : 87  Question Id : 47163915141  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33
The ages of 8 family members in years are 2, 5, 11, 31, 59, 8, 55, 35.
The median of the Ages in years is

Options:
1. ✔ 21

Question Number : 88  Question Id : 47163915142  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33
The value of \( \frac{1}{n} \{ x_1 - A) + (x_2 - A) + \ldots + (x_n - A) \} \) is Zero, if A is

Options:
3. ✔ Arithmetic mean

Question Number : 89  Question Id : 47163915143  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
The mean of the following cumulative frequency distribution is:

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative Frequency</td>
<td>3</td>
<td>13</td>
<td>22</td>
<td>29</td>
<td>32</td>
<td>33</td>
</tr>
</tbody>
</table>

Options:
2. ☑ 3.00

The mean weight of students of a class is 38 kg. The average weight of boys and girls are respectively 42 kg and 33 kg. If number of boys is 25, then the number of girls is:

Options:
1. ☑ 02

Two variables X and Y are related by the relation $2X + 3Y - 5 = 0$ and the mean of X is 2. Then the mean of Y is:

Options:
1. 3
1. ☑

The adjoining pie-chart shows qualification of employees of a company. If number of Post graduate is 55, the number of employees having education below graduation is:
The adjoining pie-chart gives the expenditure on different items in a house construction. The percentage expenditure on labour is:

Options:

\[ \frac{250}{9} \]

The average of a number, 50% of the number and 25% of the number is 280, then the number is:

Options:

2. 480

The number of deaths in a month of a city are represented as below

After converting this data into a pie chart the central angle of the number of deaths due to heart attack will be:

Options:
3. $150^\circ$

Question Number : 96  Question Id : 47163915150  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33  
Consider the histogram and frequency polygon of the same frequency distribution. If $A_h$ is the area of histogram and $A_f$ is the area of frequency polygon, then 

Options :  
1. $A_h = A_f$

Question Number : 97  Question Id : 47163915151  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33  
The mean marks of 30 students in a class is 58.5. Later on it was found that the marks 75 was wrongly recorded as 57. The correct mean is 

Options :  
4. 59.1

Question Number : 98  Question Id : 47163915152  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33  
The mean of a, b, c, d is 50. If $A = a-5$, $B = b-10$, $C = c-25$ and $D = d-40$, then the mean of $A, B, C, D$ is 

Options :  
2. 30

Question Number : 99  Question Id : 47163915153  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33  
If in a grouped data median is 50 and each frequency is multiplied by 3, then the new Median is 

Options :  
3. 50

Question Number : 100  Question Id : 47163915154  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  
Single Line Question Option : No  Option Orientation : Vertical  
Correct Marks : 1  Wrong Marks : 0.33  
The mode of the given data 5, 7, 9, 3, 7, 3, 7, 5, 7 is 

Options :
Question Number : 101  Question Id : 47163915155  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If the numbers 54963 * 6 is divisible by 8, then the value of * is:

Options :
2. ✓ 3

Question Number : 102  Question Id : 47163915156  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

Two numbers are in ratio 3:4. If their LCM is 108, then their HCF will be

Options :
1. ✓ 3

Question Number : 103  Question Id : 47163915157  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

\[ \sqrt{20} - \sqrt{20} - \sqrt{20} - \sqrt{20} - \ldots \text{upto } \infty \text{ is equal to:} \]

Options :
4. ✓ 2

Question Number : 104  Question Id : 47163915158  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

The enhanced salary of man becomes Rs.24000 after 20% increment. His previous salary was

Options :
3. ✓ Rs.20000

Question Number : 105  Question Id : 47163915159  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If a sum of money of simple interest doubles in 12 years, the rate of interest per annum is:

Options :
2. ✓ \( \frac{10}{3} \)%

Question Number : 106  Question Id : 47163915160  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33
The cost price of 36 books is equal to the selling price of 30 books. The gain percent is:

Options:
1. ✓ 20%

Question Number : 107  Question Id : 47163915161  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

The ratio of the ages of two boys is 3:4. After 3 years, the ratio will be 4:5. The ratio of their ages after 21 years will be

Options:
4. ✓ 10:11

Question Number : 108  Question Id : 47163915162  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If a and b are real numbers and \( \log_e \frac{a}{b} + \log_e \frac{b}{a} = \log_e (a+b) \), then

Options:
1. ✓ a+b = 1

Question Number : 109  Question Id : 47163915163  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If \( 3x^3 + x^2 - 12x - 4 \) is divided by \( (x-3) \), then remainder is:

Options:
2. ✓ 50

Question Number : 110  Question Id : 47163915164  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

Number of solutions of simultaneous equations \( 2x-3y = 5, 6x-9y = 10 \) is/are

Options:
4. ✓ No solution

Question Number : 111  Question Id : 47163915165  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

The roots of equation \( x^2 - 10x - 24 = 0 \) are:

Options:
3. ✔ -2, 12

Question Number : 112 Question Id : 47163915166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0.33
The g.c.d. (greatest common divisor) of \(x^2-9x+20\) and \(x^2-10x+24\) is:
Options :
1. ✔ X -4

Question Number : 113 Question Id : 47163915167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0.33
If A and B are two non-empty sets, then which one of the following is not correct
Options :
2. ✔ \((A \cup B)^c = A^c \cap B^c\)

Question Number : 114 Question Id : 47163915168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0.33
For any two sets A and B, \((A-B) \cup (B-A)\) is equal to:
Options :
4. ✔ \((A \cup B) - (A \cap B)\)

Question Number : 115 Question Id : 47163915169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0.33
The value of \(\frac{9x(81)^{3/4}}{(27)^{2/3}}\) is:
Options :
1. ✔ 27

Question Number : 116 Question Id : 47163915170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0.33
If \(\sin \theta = \frac{3}{5}\) and \(\theta\) is acute angle, then \(2 \cos \theta\) is equal to:
Options :
8
3. ✔ 5
A ladder leaning against a vertical wall makes an angle of $60^\circ$ with the horizontal ground. The foot of the ladder is 3 metre away from the Wall. Then length of the ladder is:

Options:
1. $6$ metre

The length of the shadow of a vertical tower on the level ground increases by 10 metre when the attitude of the sun changes from $45^\circ$ to $30^\circ$. The height of the tower is:

Options:
2. $5(\sqrt{3} + 1)$ metre

The height of a tower is $100\sqrt{3}$. The angle of elevation of a tower from a distance 100 metre from its feet is:

Options:
3. $60^\circ$

For a triangle ABC, D and E are two points on AB and AC such that $AD=\frac{1}{3}AB$ and $AE=\frac{1}{3}AC$. If $BC = 15$ c.m., then DE is:

Options:
2. $5$ cm

If the angle between two radii of a circle is $70^\circ$, then the angle between the tangents at the ends of the radii is:

Options:
4. ✓ 110°

In a circle, PT is the tangent to the circle with centre 0 such that OT = 6 cm, \( \angle OTP = 60° \)
and P is a point on the circle, then the length of PT is:

Options:

3 ✓ 3 cm

Question Number : 123  Question Id : 47163915177  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

Let AD and BE are two medians of triangle ABC. If OD = 4 cm, where O is the centroid of the Triangle ABC, then AD is equal to:

Options:

3 ✓ 12 cm

Question Number : 124  Question Id : 47163915178  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If in a parallelogram ABCD, \( \angle ABC = 60° \), then \( \angle DAB \) is equal to:

Options:

3 ✓ 120°

Question Number : 125  Question Id : 47163915179  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If angles of a triangle are in the ratio 2:3:4, then the smallest angle of the triangle is:

Options:

2 ✓ 40°

Question Number : 126  Question Id : 47163915180  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes
Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

The slope of a line perpendicular to the line 6x-4y+3 = 0 is:

Options:

2
3 ✓ \( \frac{-2}{3} \)
The area of a triangle formed by co-ordinate axes and the line $4x + 3y = 12$ is

(in square unit)

Options:

1. $6$

If the height and the radius of the base of a cone are each increased by 100%, then the volume of cone becomes

Options:

4. Eight times that of original

A solid sphere is melted and recast into a right circular cone with a base radius equal to the radius of sphere. The ratio of the height and radius of cone so formed is:

Options:

2. $4:1$

The cost of painting the whole surface area of a cube at the rate of 17 paise per cm$^2$ is Rs. 146.88. Then diagonal of the cube is:

Options:

1. $12\sqrt{3}$ cm

A Conical circus tent is to be made of Canvas. The height of tent is 24 metre and the radius of base is 7 metre. If $\pi = \frac{22}{7}$, then the canvas required is:

Options:
3. ✔ 550 \text{ metre}^2

If the sum of three adjacent sides and the total surface area of the rectangular box are 15 cm and 100 cm\textsuperscript{2} respectively, then the maximum length of the stick that can be placed in the box is:

Options:

4. ✔ 5\sqrt{5} \text{ cm}

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Question Number : 133  Question Id : 47163915187  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

A hemispherical bowl 30 cm in diameter holds water twentyfive times as much a cylindrical tube. If the height of tube is 10 cm, then the diameter of the tube is:

Options:

2. ✔ 6 \text{ cm}

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Question Number : 134  Question Id : 47163915188  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

Three cubes of Volume 1 \text{ cm}^3, 216 \text{ cm}^3 and 512 \text{ cm}^3 are melted to form a new cube. The diagonal of the new cube is:

Options:

2. ✔ 9 \sqrt{3} \text{ cm}

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Question Number : 135  Question Id : 47163915189  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

A 7 metre wide path is to be made around a circular garden having a diameter of 14 metre.

The area of path in square metre will be:

Options:

4. ✔ 462

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Question Number : 136  Question Id : 47163915190  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical
Correct Marks : 1  Wrong Marks : 0.33

If area of a circle is 7 times of its perimeter (numerically), then perimeter of circle is:
3. ✓ 88 unit

Question Number : 137  Question Id : 47163915191  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

One side of a parallelogram is 28 cm and its distance from opposite side is 18 cm, then

area of Parallelogram is:

Options :

2. ✓ 504 cm²

Question Number : 138  Question Id : 47163915192  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If each side of a square is increased by 10%, then its area is increased by

Options :

3. ✓ 21%

Question Number : 139  Question Id : 47163915193  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

The volume of a cylinder whose curved surface area is 1408 cm² and height is 16 cm, will be:

Options :

2. ✓ 9856 cm³

Question Number : 140  Question Id : 47163915194  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If a copper wire is bend to make a square whose area is 324 cm². If the same wire is bent
to form a semi-circle, then the radius of semi-circle is:

Options :

2. ✓ 14 cm

Question Number : 141  Question Id : 47163915195  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical  Correct Marks : 1  Wrong Marks : 0.33

If area of an equilateral triangle is $4\sqrt{3}$cm², then length of each side of the triangle is:

Options :
2. ✔ 4 cm

A square and an equilateral triangle have same base, then the ratio of areas of them is:

Options:

2. ✔ 4:√3

Question Number : 143  Question Id : 47163915197  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical

Correct Marks : 1  Wrong Marks : 0.33

The mean of first five prime numbers is:

Options:

2. ✔ 5.6

Question Number : 144  Question Id : 47163915198  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical

Correct Marks : 1  Wrong Marks : 0.33

The following observations are arranged in ascending order. If median of the data is 25, then value of x is:

17, x, 24, x+7, 35, 36, 46.

Options:

2. ✔ 18

Question Number : 145  Question Id : 47163915199  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical

Correct Marks : 1  Wrong Marks : 0.33

(Means – Mode) = K(Means – median), the value of K is:

Options:

3. ✔ 3

Question Number : 146  Question Id : 47163915200  Question Type : MCQ  Option Shuffling : Yes  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical

Correct Marks : 1  Wrong Marks : 0.33
A, B, C, D and E. Study the graph and answer the questions, where ■ Demand and □ Production (in tonnes).

What is the ratio of the average demand and average production of these five countries?

Options:

2. ✅ 67:64

The production of country D is how many times the production of Company A?

Options:

1. ✅ \(\frac{4}{3}\) times

2. ✅ \(\frac{3}{4}\) times
A, B, C, D and E. Study the graph and answer the questions, where □ Demand and □ Production (in tonnes).

The demand of country D is what percent of that of country C

Options:

3. ✔ 53.33 %

What is the ratio of the production of Country A to the total production of the remaining four Countries?

Options:

1. ✔ 3:13
A, B, C, D and E. Study the graph and answer the questions, where ■ Demand and □ Production (in tonnes).

What is the difference between total demand and the total production of these five countries?

Options:

4. ✔ 300 tonnes