MATHS

BOOKS - CBSE COMPLEMENTARY MATERIAL MATHS (HINGLISH)

PRACTICE QUESTION PAPER-2

Part A

1. Which the following is the formula for the volume of the sphere?

A. $\dfrac{1}{3}\pi r^3$

B. $\dfrac{2}{3}\pi r^3$

C. πr^3

D. $\dfrac{4}{3}\pi r^3$

Answer: D

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2. If x=0 and y=k are the solution of the equation 5x-3y=3, the value of k is:

A. $\dfrac{3}{2}$

B. 0

C. -1

D. $\dfrac{-2}{3}$

Answer: C

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3. The class mark of the class 100-120 is

A. 100

B. 110

C. 120

D. 20

Answer: B

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4. How many triangle are possible having angle $60°$, $90°$ and $30°$

A. only one

B. None

C. Infinite

D. only 3

Answer: C

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5. Which of the following is true if $\triangle PQR \cong \triangle SET$?

A. PQ=SE

B. QR+ST

C. $\angle P = \angle T$

D. PR=SE

Answer: A

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6. Which of the follwing is rational number?

A. 0.123456.....

B. $\sqrt{23}$

C. $\sqrt{36}$

D. $2\sqrt{3}$

Answer: C

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7. The base and height of a parallelogram are 10cm and 6cm respectively. The area of parallelogram is:

A. $30cm^2$

B. $60cm^2$

C. $16cm^2$

D. $8cm^2$

Answer: B

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8. The probabillity of getting a factor of 6 on throwing a dice is:

A. $\dfrac{2}{3}$

B. $\dfrac{1}{3}$

C. $\dfrac{1}{6}$

D. $\dfrac{3}{2}$

Answer: A

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9. The angle in a semicircle measures

A. $120°$

B. $60°$

C. $180°$

D. $90°$

Answer: D

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10. Which quadrant has both ordinate and abscissa negative?

A. I

B. II

C. III

D. IV

Answer: C

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11. Find the value of C if in a triangle S=13,a=8, and b=7.

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12. Find the decimal expansion of $\dfrac{31}{16}$.

13. If (x-1) is a factor of the polynomial $2x^2 - 2a$ then find the value of a .

14. If the median of 6,4,7,13 and p is 8 then find the value of p

Part B

1. Find any two solutions of the equation 4x + 3y = 12

2. If each sides of a triangle is doubled then find the ratio of the area of the new triangle

thus formed and the given triangle.

3. The volume of a right circular cone is 9856 cm^3 . If the diameter of the base is 28cm, find:

(i) height of the cone (ii) slant height of the cone (iii) curved surface area of the cone.

4. $(625)^{0.16} \times (625)^{0.09} =$

5. Factorise $(p - q)^3 + (q - r)^3 + (r - p)^3$.

6. If p(x) = x+5 then find the value of p(x) + P(-x)

7. The side of cube is 8cm. Find the lateral surface area of the cube.

8. A dice is thrown 80 times. If the probability of having an even number is 7/10 then how many times an odd number appears on dice?

Part C

1. The cost of four chairs and five tables is 3200. Write a linear equation in two variables for this statement and find out its two solutions.

2. Solve for X: $(5x+1)(x+3) - 8 = 5(x+1)(x+2)$

A. 12

B. 13

C. 14

D. 15

Answer: x=15

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3. The sides of a triangle are in the ration 11:19:24 and its perimeter is 540cm. Find the area of the triangle.

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4. The side of a triangle shaped sheet are 5cm, 12cm and 13cm. Find the cost of painting on the sheet at the rate of Rs 30 per cm sq.

5. Divide the polynomial $9x^3 - 3x^2 + 15x - 3$ by (3x-1) and find its quotient and remainder.

6. Prove that the angle opposite to the equal sides of an equilateral triangle are equal.

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7. In a rhombus ABCD, $\angle ABC = 72^\circ$. Find $\angle ACD$

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Part D

1. The angle subtended by an arc of a circle at the centre is double the angle subtended by it any point on the remaining part of the circle.

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2. Find the mean, median and mode for the following distribution. 75, 62, 88, 55, 90, 95, 85, 59, 72, 78, 90, 95, 90, 95, 80, 71, 44, 57, 68, 90.

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3. In $\triangle ABC$ (see the fig.); $DE \mid \mid BC$, find the value of x.

4. The inner diameter of a cylindrical wooden pipe is 24 cm and its outer diameter is 28 cm. The length of the pipe is 35 cm. Find the mass of the pipe, if 1 cm3 of wood has a mass of 0.6 g.

5. Simplify: $\dfrac{(361)^3 + (139)^3}{(361)^2 - (361 \times 139) + (139)^2}$

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6. Express 0.245 in the form $\dfrac{p}{q}$

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7. if x+a is a factor of the polynomials $x^2 + px + q$ and $x^2 + mx + n$ prove that $a = \dfrac{n - q}{m - p}$