

CLASS IX - TEST -1

- 1 If $2^{x-1} + 2^{x+1} = 320$, find the value of x .
 (A) 8 (B) 32 (C) 5 (D) 7
- 2 Find the perpendicular distance of the point P (5, 7) from the y-axis.
 (A) 5 (B) 0 (C) 12 (D) 7
- 3 What is the sum of the abscissa of any three points on the y- axis?
 (A) 1 (B) any real number (C) 0 (D) 3
- 4 If $p = 7 + 4\sqrt{3}$ and $q = \frac{1}{p}$ then find the value of $p - q$.
 (A) 8 (B) $4\sqrt{3}$ (C) $8\sqrt{3}$ (D) 14
- 5 $\sqrt{\frac{1}{2}}$ is a polynomial of degree ____
 (A) $\frac{1}{2}$ (B) 1 (C) 0 (D) Not defined
- 6 The value of the polynomial $5x^3 - 4x^2 + 9$ when $x = -1$ is ____
 (A) -6 (B) 0 (C) 9 (D) -9
- 7 If $f(x) = x^2 - 4x + 9$, find $f(1) + f(0) = ?$
 (A) 15 (B) 9 (C) 14 (D) 11
- 8 Which of the following is irrational?
 (A) 0.37 (B) 4.414141 (C) $\frac{1}{3}$ (D) 0.404004000400004.....
- 9 If $\left(\frac{3}{4}\right)^6 \times \left(\frac{16}{9}\right)^5 = \left(\frac{4}{3}\right)^{x+2}$ find x .
 (A) 1 (B) 2 (C) 4 (D) 0
- 10 Write the coordinates of the following: Lying on y – axis with the y – coordinate - 3
 (A) (-3, 0) (B) (3, 0) (C) (0, -3) (D) (-3, -3)
- 11 If $a + b + c = 15$ and $ab + bc + ca = 60$, then find the value of $a^2 + b^2 + c^2$
 (A) 100 (B) 225 (C) 105 (D) 120
- 12 Simplify and find the value of $3 + \frac{1}{\sqrt{3}} + \frac{1}{3+\sqrt{3}} + \frac{1}{\sqrt{3}-3}$.
 (A) 6 (B) 3 (C) 4 (D) $\sqrt{3}$
- 13 What are the co-ordinates of the foot of the perpendicular drawn from the point (-6, 3) on x- axis?
 (A) (-3, 0) (B) (3, 0) (C) (6, 0) (D) (-6, 0)
- 14 If $\frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}} = a + b\sqrt{15}$, find the value of $a + b$.
 (A) 4 (B) 1 (C) 5 (D) 3
- 15 If $p(x) = x + 3$, then $p(-x) - p(x)$ is equal to ____
 (A) x (B) $2x$ (C) $-2x$ (D) 6
- 16 What is the value of k for the polynomial $x^2 + 8x + k$, if -1 is a zero of the polynomial?
 (A) -7 (B) 7 (C) -8 (D) 9
- 17 Find the remainder when $4x^3 - 3x^2 + 4x - 2$ is divided by $x - 1$
 (A) 3 (B) 8 (C) -3 (D) 5
- 18 The factors of $a^4 - 16b^4$ are ____
 (A) $(a^2 + 4b^2)(a + 2b)(a - 2b)$ (B) $(a^2 + b^2)(a + 2b)(a - 2b)$
 (C) $(a^2 + b^2)(a + b)(a - b)$ (D) $(a^2 - 4b^2)(a - 2b)(a - 2b)$
- 19 If $a + b + c = 5$ and $ab + bc + ca = 10$, then the value of $a^3 + b^3 + c^3 - 3abc =$ ____
 (A) 25 (B) -10 (C) -25 (D) 15
- 20 If $2^x \times 4^x = (8)^{\frac{1}{3}} \times (32)^{\frac{1}{5}}$ then find the value of x .
 (A) $\frac{2}{3}$ (B) $-\frac{2}{3}$ (C) $-\frac{3}{2}$ (D) 2