

Polynomials Class 10 Maths 20 MCQS Objective Type Questions:

1. If one of the zeroes of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is

- (a) 10 **(b) -10 ✓** (c) -7 (d) -2

2. If one zero of the polynomial $3x^2 + 8x + k$ is the reciprocal of the other, then the value of k is

- (a) 3 ✓ (b) -3 (c) $\frac{1}{3}$ (d) $-\frac{1}{3}$

3. If -1 is a zero of the polynomial $P(x) = x^2 - 7x - 8$, then the other zero is

- (a) -8 (b) -7 (c) 1 **(d) 8 ✓**

4. If one of the zeroes of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is -3, then the value of k is

- (a) $\frac{4}{3}$ ✓** (b) $-\frac{4}{3}$ (c) $\frac{2}{3}$ (d) $-\frac{2}{3}$

5. If 2 and $\frac{1}{2}$ are the zeroes of $px^2 + 5x + 1$, then

- (a) $p = r = 2$ **(b) $p = r = -2$ ✓**
(c) $p = 2$ and $r = -2$ (d) $p = -2$ and $r = 2$

6. If $x - 1$ is a factor of the polynomial $p(x) = x^3 + ax^2 + 2b$ and $a + b = 4$, then

- (a) $a = 5$ and $b = -1$ **(b) $a = 9$ and $b = -5$ ✓**
(c) $a = 7$ and $b = -3$ (d) $a = 3$ and $b = 1$

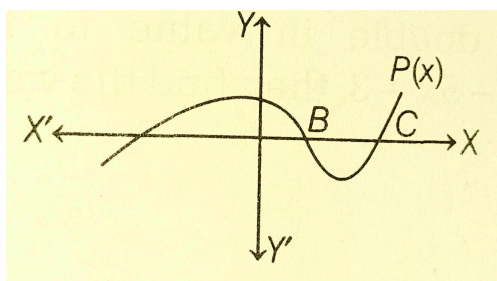
7. Zeroes of a quadratic polynomial $x^2 - 5x + 6$, are

- (a) -5, 1 (b) 5, 1 **(c) 2, 3 ✓** (d) -2, -3

8. The graph of a polynomial $P(x)$ cuts the X-axis at 3 points and touches it at 2 other points. The number of zeroes of $P(x)$ is

- (a) 1 (b) 2 (c) 3 **(d) 5 ✓**

9. In the figure, the graph of a polynomial $P(x)$ is shown. The number of zeroes of $P(x)$ is



- (a) 1 (b) 2 (c) 3 ✓ (d) 4

10. If α and β are the zeroes of the polynomial $2x^2 + 13x + 6$, then $\alpha + \beta$ is equal to

- (a) -3 (b) 3 (c) $13/2$ ✓ (d) $-13/2$

11. If the sum of the zeroes of the quadratic polynomial $kx^2 + 2x + 3k$ is equal to their product, then k equals

- (a) $1/3$ (b) $-1/3$ (c) $2/3$ (d) $-2/3$ ✓

12. If α, β are the zeroes of the quadratic $p(x) = x^2 - (k + 6)x + 2(2k - 1)$, polynomial, then the value of k , if $\alpha + \beta = \frac{1}{2} \alpha\beta$, is

- (a) -7 (b) 7 ✓ (c) -3 (d) 3

13. If α and β are zeroes and the quadratic polynomial $f(x) = x^2 - x - 4$, then the value of $1/\alpha + 1/\beta - \alpha\beta$ is

- (a) $15/4$ ✓ (b) $-15/4$ (c) 4 (d) 15

14. A quadratic polynomial having the sum and product of its zeroes as 5 and 0 respectively, is

- (a) $x^2 + 5x$ (b) $2x(x - 5)$ ✓ (c) $5x^2 - 1$ (d) $x^2 - 5x + 5$

15. The quadratic polynomial, the sum of whose zeroes is -5 and their product is 6, is

- (a) $x^2 + 5x + 6$ ✓ (b) $x^2 - 5x + 6$ (c) $x^2 - 5x - 6$ (d) $-x^2 + 5x + 6$

16. A quadratic polynomial, whose zeroes are -3 and 4, is

- (a) $x^2 - x + 12$ (b) $x^2 + x + 12$ (c) $x^2/2 - x/2 - 6$ ✓ (d) $2x^2 + 2x - 2$

17. If one of the zeroes of the cubic polynomial $ax^3 + bx^2 + cx + d$ is zero, the product of then other two zeroes is

- (a) $-c/a$ (b) c/a ✓ (c) 0 (d) $-b/a$

18. If the square of the difference of the zeroes of the quadratic polynomial $x^2 + px + 45$ is equal to 144, then the value of p is

- (a) ± 9 (b) ± 12 (c) ± 15 (d) ± 18 ✓

19. If α and β are zeroes and the quadratic polynomial $p(S) = 3S^2 - 6S + 4$, then the value of $\alpha/\beta + \beta/\alpha + 2(1/\alpha + 1/\beta) + 3\alpha\beta$

- (a) 7 (b) 6 (c) 8 ✓ (d) 10