

EduSahara™ Learning Center Assignment**Grade : Class IX, CBSE****Chapter : Polynomials****Name : Zeros of a Polynomial**

1. The value of the polynomial $(b - 2)$ at $b = (-4)$ is

(i) -7 (ii) -5 (iii) -8 (iv) -3 (v) -6

2. The value of the polynomial $(-4s^2 + 2s - 3)$ at $s = 2$ is

(i) -16 (ii) -12 (iii) -15 (iv) -14 (v) -18

3. The value of the polynomial $(-8j^3 - 5j - 1)$ at $j = (-5)$ is

(i) 1027 (ii) 1024 (iii) 1025 (iv) 1023 (v) 1021

4. The value of the polynomial $(2q^4 - 9q^3 - 5q^2 + 6q + 5)$ at $q = 3$ is

(i) -103 (ii) -106 (iii) -101 (iv) -104 (v) -102

5. The value of the polynomial $7r$ at $p = 3, q = (-3), r = 5$ is

(i) 36 (ii) 34 (iii) 35 (iv) 33 (v) 38

6. Find the value of k such that $4x^4 - 40x^3 + 124x^2 + kx$ is exactly divisible by $(2x - 4)$

(i) -118 (ii) -121 (iii) -119 (iv) -120 (v) -122

7. If 3 and -3 are the zeros of the polynomial

$f(x) = ax^4 + bx^3 - 14x^2 - 54x - 36$, find the value of a and b

(i) 2, 7

(ii) 5, 1

(iii) 2, 6

(iv) 3, 6

(v) 7, 3

Find the value of a and b such that

8. $ax^4 + 4x^3 - 18x^2 + bx$ is exactly divisible by $(2x^2 - 2x - 12)$

- (i) $-35, 3$
- (ii) $2, -35$
- (iii) $-37, 1$
- (iv) $3, -36$
- (v) $2, -36$

9. If $(\frac{-4}{3})$ is the zero of the polynomial $f(x) = 6x^2 + kx - 12$, find k

- (i) -2 (ii) -4 (iii) -1 (iv) 2 (v) 0

10. If the polynomial $f(x) = kx^2 - 24x + 18$ is exactly divisible by $(2x - 6)$, find k

- (i) 6 (ii) 7 (iii) 5 (iv) 4 (v) 9

11. Which of the following are true?

- a) If $(x - a)$ is a factor of $f(x)$, then $f(a) = 0$
 - b) Zero of a polynomial and root of the polynomial are synonymous
 - c) If $(x + a)$ is a factor of $f(x)$, then $f(a) = 0$
 - d) A linear polynomial in one variable has only one root
 - e) Zero of a polynomial and zero polynomial are synonymous
 - f) A polynomial of degree n has atmost n zeros
 - g) Zero of a polynomial is the value of the variable for which the polynomial value is zero
- (i) $\{e, b\}$ (ii) $\{c, e, d\}$ (iii) $\{c, a\}$ (iv) $\{a, b, d, f, g\}$ (v) $\{c, f, g\}$

12. Given $f(m) = (-9m - 2)$, find $f(2)$

- (i) -17 (ii) -19 (iii) -20 (iv) -23 (v) -21

13. Given $f(n) = (5n^2 - 7n - 6)$, find $f(5)$

- (i) 87 (ii) 84 (iii) 83 (iv) 85 (v) 81

14. Given $f(k) = (9k^3 - k^2 + 6k)$, find $f((-1))$

- (i) -16 (ii) -13 (iii) -17 (iv) -15 (v) -19

15. Given $f(n) = ($ _____ $)$, find $f(1)$

$$-2n^4 + 3n^3 + 8n^2 - 8n - 2$$

(i) 1 (ii) -4 (iii) -1 (iv) -2 (v) 0

Assignment Key

- 1) (v)
- 2) (iii)
- 3) (ii)
- 4) (i)
- 5) (iii)
- 6) (iv)
- 7) (iii)
- 8) (v)
- 9) (iii)
- 10) (i)
- 11) (iv)
- 12) (iii)
- 13) (ii)
- 14) (i)
- 15) (iii)