

Exercise 6.2

1. Zero of the polynomial $p(x) = (cx + d)$ is
 (a) $-d$ (b) $-c$ (c) $\frac{d}{c}$ (d) $-\frac{d}{c}$ [CBSE 2010]
2. If $x = 2$ is a zero of the polynomial $2x^2 + 3x - p$, then the value of p is
 (a) -4 (b) 0 (c) 6 (d) 14 [CBSE 2010]
3. (i) Zero of the polynomial $p(x) = a^2x$, $a \neq 0$ is
 (a) 0 (b) 1 (c) -1 (d) a [CBSE 2010]

 (ii) Zero of the polynomial $p(x)$, where $p(x) = ax + 1$, $a \neq 0$, is
 (a) 1 (b) $-a$ (c) 0 (d) $-\frac{1}{a}$ [CBSE 2010]
4. If one zero of the polynomial $3x^2 - 10x + p$ is $\frac{1}{3}$, then the value of p and other zero respectively is
 (a) $3, \frac{1}{3}$ (b) $3, 3$ (c) $-\frac{1}{3}, -\frac{1}{3}$ (d) $-3, -3$
5. If $x = \frac{-1}{3}$ is a zero of the polynomial $p(x) = 27x^3 - ax^2 - x + 3$, then find the value of a . [CBSE 2010, 2011]
6. Find the zeros of the $p(x) = (x - 3)(x + 2)$.
7. Show that $x^2 + 6x + 10$ has no zero.
8. Check whether 1 is a zero of the polynomial $p(x) = x^6 - x^5 - x^4 - x^3 - x^2 - x + 1$
9. Verify whether -1 and $\frac{3}{2}$ are zeros of the polynomial $p(x) = 2x^3 - 9x^2 + x + 12$.
10. If 2 is a zero of the polynomial $p(x) = x^3 - 2kx^2 + kx - 1$.
11. If $\frac{1}{2}$ is a zero of the polynomial $p(x) = 2x^3 + ax^2 + 11x + a + 3$, find the value of a .
12. If 1 and -3 are zeroes of the polynomial $p(x) = x^3 - ax^2 - 13x + b$, find the values of a and b .

Answers

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| 1. $-\frac{d}{c}$ | 2. $p = 14$ | 3. (i) $x = 0$ | (ii) $-\frac{1}{a}$ |
| 4. $3, 3$ | 5. $a = 21$ | 6. 3 and -2 | |
| 8. 1 is not zero of $p(x)$. | 9. -1 and $\frac{3}{2}$ are zeroes of $p(x)$. | | |
| 10. $k = \frac{7}{6}$ | 11. $a = -7$ | 12. $a = 3$ and $b = 15$ | |