

1. If $3x^2 - 4x + 1 = ax^2 + bx + c - 1$, find (a, b, c) .
- A) (-3,4,2) B) (3,-4,2) C) (-3,4,3)
D) (-3,-4,-2) E) (-3,3,2)
2. If $x^4 - 2x^3 + x^2 + bx - 2 = (x-2)(x^3 + mx + n)$, find $m + n$.
- A) 2 B) -3 C) -1 D) 4 E) 5
3. When $3x^2 - 2x - 21$ is divided by $x - 3$, the quotient is
- A) $3x - 7$ B) $3x + 7$ C) $3x - 4$
D) $3x + 4$ E) $3x - 5$
4. Let $P(x) = (x^2 - 2x + 2)(x^4 + 4)$. What is the coefficient of x^5 ?
- A) 2 B) -2 C) 6 D) -8 E) 8
5. The polynomial $P(x-4) = x^3 + 2x^2 - 4$ is given. Find the remainder, when $P(x)$ is divided by $x + 5$.
- A) -4 B) -3 C) 2 D) 5 E) 1
6. The polynomial $P(5x - 2) = 4x^2 - x + 5$ is given. Find the remainder, if $P(x)$ is divided by $(x - 3)$.
- A) 10 B) 9 C) 8 D) 7 E) 6
7. Find the remainder, when the polynomial $P(x) = x^6 - 2x^4 + x^2 - 1$ is divided by $x^2 - 2$.
- A) 4 B) 3 C) 2 D) 1 E) 0
8. In a polynomial $P(x)$, $P(2) = 3$ and $P(-2) = -1$. Find the remainder, when $P(x)$ is divided $x^2 - 4$.
- A) $x - 2$ B) $x + 1$ C) $x - 1$
D) $2x - 1$ E) $2x + 2$
9. If one of the factors of the polynomial $P(x) = x^{99} + x^{88} + nx^{22} + 3$ is $(x + 1)$, then find n .
- A) -3 B) -1 C) 1 D) 2 E) 3
10. Find the remainder if the polynomial $P(x) = x^3 + 2x^2 + 3x - 5$ is divided by $x^2 - x + 1$.
- A) $5x - 7$ B) $5x - 8$ C) $4x - 7$
D) $3x - 8$ E) $4x + 6$
11. When $9x^7 - 6x^5 + 4x^4 - 2x^3 - x + 1$ is divided by x^2 , the remainder is
- A) 1 B) -1 C) $x - 1$
D) $-x + 1$ E) $-x - 1$
12. Given that $P(x) = (x - a)^3(2x + a)^4$ whose constant term is 1. Find the remainder when $P(x)$ is divided by $x^2 - x$.
- A) $3x - 4$ B) $7x + 1$ C) $x - 7$
D) $17x - 1$ E) $19x + 1$