Learnzy Academy

Worksheet: Polynomials

1. What is the degree of the polynomial sqrt(3)x■ - 5x + 2?
2. If $p(x) = x^2 - 4$, then p(2) is:
3. When $x^100 + 1$ is divided by x - 1, the remainder is:
4. α and β are zeroes of the quadratic polynomial $x^2 – 6x + y$. Find the value of 'y' if $3\alpha + 2\beta = 20$
5. Find the quadratic polynomial if its zeroes are 0 and $\sqrt{5}$.
6. Factorize $27x^3 + y^3$.
7. If $p(x) = x^3 - x^2 + x - 1$, find p(1).
8. The expanded form of $(2x + 1)^3$ is:
9. If x - 1 is a factor of $2x^2 + kx$, then k is:
10. If the zeroes of the quadratic polynomial $p(x) = ax^2 + bx + c$ are reciprocal of each other, prove that c = a.
11. If p(x) = ax - 3 and p(1) = 0, then a is:
12. Find a quadratic polynomial, the sum and product of whose zeroes are $\sqrt{2}$ and -3/2, respectively. Also find its zeroes.
13. Factorize $8x^3 - y^3$.
14. Factorize $x^2 - 16$.
15. What is the degree of the polynomial 5?
16. If x + 1 is a factor of $ax^3 + x^2 - 2x + 4a - 9$, then a is equal to:
17. Factorize $x^3 + 6x^2 + 12x + 8$.
18. Find the zero of the polynomial p(x) = 2x + 6.
19. If one zero of the polynomial $(a^2 + 9)x^2 + 13x + 6a$ is the reciprocal of the other, find the value of a.
20. If one of the factor of $x^2 + x – 20$ is (x + 5). Find the other