Polynomials : Worksheet -12

1. If $y = p(x)$ is represented by the given graph, then the number of zeroes

   are: [   ]

   [A] 4   [B] 3

   [C] 2   [D] 1

2. The graph of the polynomial $f(x) = 2x - 5$ is a straight line which

   intersects the $x-axis$ at exactly one point namely: [   ]

   [A] $\left(\dfrac{-5}{2}, 0\right)$ [B] $\left(0, \dfrac{-5}{2}\right)$ [C] $\left(\dfrac{5}{2}, 0\right)$ [D] $\left(\dfrac{5}{2}, \dfrac{-5}{2}\right)$

3. If the zeroes of a quadratic polynomial are equal in magnitude but

   opposite in sign, then: [   ]

   [A] sum of its zeroes is 0   [B] product of its zero is 0

   [C] one of the zero is 0   [D] there are no zeroes of the
   polynomial

4. The $\alpha \ and \ \beta$ are the zeroes of the polynomial $2x^2 + 5x + 1$, then the value
   of $\alpha + \beta + \alpha\beta$ is: [   ]

   [A] -2 [B] -1 [C] 1   [D] 3

5. The polynomial whose zeroes are -5 and 4 is: [   ]

   [A] $x^2 - 5x + 4$ [B] $x^2 + 5x - 4$ [C] $x^2 + x - 20$ [D] $x^2 - 9x - 20$

6. The $\sqrt{3}$ and $-\sqrt{3}$ are the zeroes of a polynomial $p(x)$, then $p(x)$ is:

   [   ]

   [A] $x^2 - 3$ [B] $x^2 - 9$ [C] $x^2 + 3$ [D] $3x^2 - 1$

7. The maximum number of zeroes that a polynomial of degree 3 can

   have is: [   ]

   [A] One   [B] Two   [C] Three   [D] None

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8. If 1 is the zero of the quadratic polynomial $x^2 + kx - 5$, then the value of k is: [   ]

    [A] 4   [B] -4 [C] 0   [D] 5

9. If one zero of the quadratic polynomial $2x^2 + kx - 15$ is 3, then the other zero is: [   ]

    [A] -15 [B] $\dfrac{-15}{2}$ [C] $\dfrac{-5}{2}$ [D] -1

10. Sum and product of the zeroes of polynomial $x^2 - 3$ are respectively: [   ]

    [A] $-3, 0$ [B] $0, -3$ [C] $0, 3$ [D] $3, 0$

11. The $\alpha \ and \ \beta$ are the zeroes of the polynomial $p(x) = x^2 - 5x + 6$, then the value of $\alpha + \beta - 3\alpha\beta$ is: [   ]

    [A] -5 [B] -13 [C] 13   [D] 3

12. The quadratic polynomial whose zeroes are 5 and -2 is: [   ]

    [A] $x^2 + 5x2$ [B] $x^2 - 2x + 5$ [C] $x^2 + 3x - 10$ [D] $x^2 - 3x - 10$