

Class Test on Factorisation

F.M : 12

Std: VIII

Time : 35 mins

Choose the correct option:

(1×2=2)

1. On dividing $(4x - 9x^3)$ by $(2+3x)$, the quotient is-

- (a) $2-3x$ (b) $x(2-3x)$ (c) $3x-2$ (d) $x(3x-2)$

2. **Assertion(A):** One factor of $(9 - 6x + x^2 - 25y^2)$ is $(3 - x - 5y)$.

Reason (R): $a^2-b^2=(a+b)(a-b)$ and the factorisation is defined as expressing or decomposing a number or an algebraic expression as a product of its prime factors or irreducible factors .

- (a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

3. **Case Study:**

The area of the base of a cylinder is $\pi(a^2-12a+36)$ cm² and the volume of that cylinder is $\pi(a^2-36)(a-6)$ cm³.

Based on the above information, answer the following questions:

(i) Find the radius of the base of the cylinder. (2)

(ii) Find the height of the cylinder. (2)

4. Factorise: $y^2-11y+30$ (2)

5. Simplify : $\frac{(3x^2+15x+18)(x+2)}{3(x^2+4x+4)}$ (4)

