Factorization: Worksheet -9

1. $144\,a^2b^2 - 4 =$ _____ [ ]

   a] $4(6ab + 1)(6ab - 1)$ b] $2(6ab + 1)(6ab - 1)$

   c] $3(6ab + 1)(6ab - 1)$ d] $5(6ab + 1)(6ab - 1)$

2. $x^4 - 16 =$ _____ [ ]

   a] $(x + 2)(x - 2)(x^2 + 4)$ b] $(x - 2)(x - 2)(x^2 + 4)$

   c] $(x + 2)(x + 2)(x^2 + 4)$ d] None

3. Degree of $(z^3 - 14)(z^3 - 1)$ is _____ [ ]

   a] 6 b] 3 c] 4 d] None

4. $x^4 + 3x^2 + 2 \div x^2 + 2$ then remainder = _____ [ ]

   a] $x^2 + 2$ b] $x^2 + 1$ c] x^2 d] 0

5. If $6x^2 + x + 1$ is divided by $2x + 1$ then its remainder is: _____

   a] 2 b] 3 c] 4 d] $\frac{-1}{2}$ [ ]

6. $\pi r^2 + \pi rl =$ _____ [ ]

   a] $\pi r(r + l)$ b] $\pi(r^2 + rl)$ c] $\pi r(1 + l)$ d] None

7. $(x + y)^2 - (x - y)(x + y) =$ _____ [ ]

   a] $2y(x + y)$ b] $2x(x + y)$ c] $2y(x - y)$ d] $2x(x - y)$

8. Expand $\left(\frac{x}{3} - \frac{y}{2}\right)^2$ [ ]

   a] $\frac{x^2}{9} + \frac{y^2}{4}$ b] $\frac{x^2}{9} - \frac{y^2}{4}$ c] $\frac{x^2}{9} + \frac{y^2}{4} - \frac{xy}{9}$ d] None of these

9. Factorize the polynomial, $-r^2 + p^2 + q^2 - 2pq$. [ ]

   a] $(p - q - r)(p - q + r)$ b] $(p + q + r)(p - q - r)$

   c] $(p - q)(q - r)$ d] $(p - r)(q - r)$

10. The polynomial, $x^2 + y^2 - z^2 - 2xy$ on factorization gives [ ]

a] $(x - y - z)(x - y + z)$ b] $(x + y + z)(x - y + z)$

c] $(x + y + z)(x - y - z)$ d] $(x - y + z)(x + y - z)$