

## WORKSHEET-1

## CLASS-VIII (FACTORIZATION)

**Q1.** Find common factors:-

(i)  $10pqr, 30qr, 40pr.$       (ii)  $3x^2y^3, 9x^3y^2, 3x^2y^2$

**Q2.** Factorize the following :-

(a)  $7xy + 14xy^2$       (b)  $5(p+q)^3 - 15(p+q)^2$   
 (c)  $2a^2bc - 3ab^2c + 4abc^2$       (d)  $15(a+b)^3(a-b)^2 - 20(a+b)^2(a-b)^3$

**Q3.** Resolve the following into factors:-

(a)  $-12ab^2 + ab - b^3 + 12a^2$   
 (b)  $-5a - 11b + 55 + ab$   
 (c)  $1 + y^2 + x^2 + x^2y^2$   
 (d)  $a^2x^2 - b^2x^2 - a^2y^2 + b^2y^2$

**Q4.** Factorize the following:-

(a)  $a^2 - 14a + 49$       (b)  $81p^2 + 54pq + 9q^2$   
 (c)  $5a^2m^4 - 80n^4a^6$       (d)  $1 - \frac{1}{25}m^2$

**Q5.** Find the factors:-

(a)  $x^2 - 5x - 24$       (b)  $x^2 + 5x - 24$   
 (c)  $x^2 - 10x + 24$       (d)  $x^2 - x - 110$

**Q6.** Resolve these :-

(a)  $l^2 + 4m^2 + 4lm - 1$       (b)  $ax^2 - ay^2 - by^2 + bx^2$   
 (c)  $25(2(2a+3b)^2 - 1)$

**Q7.** Do as directed:-

(a)  $2a^8b^8 \div (-6a^6b^4)$       (b)  $2x \div \frac{2x}{3}$   
 (c)  $3p^2q^3(7r-35) \div 27pq(r-5)$   
 (d)  $(3a^3 + 2a^2 + 3a) \div 2a$   
 (e)  $15ab(4a^2 - 25b^2) \div 3ab(2a+5b)$

**Q8.** Divide the following using the long division method.

(a)  $x^3 - x^2 + 2x - 2$  by  $x - 1$   
 (b)  $2x^4 - 9x^3 + 21x^2 - 26x + 12$  by  $2x - 3$   
 (c)  $6x^2 + 11x + 4$  by  $2x + 1$   
 (d)  $3x^2 - 8x^2 + 4x - 24$  by  $2x - 4$   
 (e)  $2x^3 - x^2 - 2x + 1$  by  $x + 1$