



Octahedral classes, kharadi
2nd floor, yashwant plaza, near bank of India,

CLASS 08 - MATHEMATICS

Factorisation

Time Allowed: 1 hour and 30 minutes

Maximum Marks: 70

Section A

1. Answer the following [10]
- a) Factorise the expression: $20l^2m + 30alm$
 - b) Factorise the following expression : $6p - 12q$
 - c) Factorise the following expression : $7a^2 + 14a$
 - d) Find the division: $7x^2y^2z^2 \div 14xyz$
 - e) Factorise the following expression : $5x^2y - 15xy^2$
 - f) Factorise the expression: $6p - 12q$
 - g) Factorise the expressions: $ax^2 + bx$
 - h) Find and correct the errors in the mathematical statement. Substituting $x = -3$ in the given equation $\frac{3}{4x+3} = \frac{1}{4x}$.
 - i) Factorise the expression: $7a^2 - 14a$
 - j) Find and correct the errors in the following mathematical statement: $(2x)^2 + 5x = 4x + 5x = 9x$
2. Answer the following [10]
- a) Find and correct the errors in the mathematical statement. Substituting $x = -3$ in the given equation $(y - 3)^2 = y^2 - 9$
 - b) Work out the division: $(10x - 25) \div (2x - 5)$
 - c) Find the common factors of the given terms : $16x^3, 4x^2, 32x$
 - d) Factorise the expressions: $(1m + 1) + m + 1$
 - e) Divide as directed: $x(x + 1)(x + 2)(x + 3) \div x(x + 1)$
 - f) Factorise the expression: $p^2 - 10p + 25$
 - g) Divide the given polynomial by the given monomial: $(5x^2 - 6x) \div 3x$
 - h) Factorise. $63a^2 - 112b^2$
 - i) Factorise the following expressions: $p^2 + 6p + 8$
 - j) Divide: $z(5z^2 - 80)$ by $5z(z + 4)$
3. Answer the following [20]
- a) Factorise the expression and divide them as directed: $(y^2 + 7y + 10) \div (y + 5)$
 - b) Factorise: $a^4 - 2a^2b^2 + b^4$
 - c) Divide: $44(x^4 - 5x^3 - 24x^2)$ by $11x(x - 8)$
 - d) Divide the given polynomial by the given monomial: $(3y^8 - 4y^6 + 5y^4) \div y^4$

- e) Factorise the expression and divide them as directed: $5pq (p^2 - q^2) \div 2p (p + q)$
- f) Divide the given polynomial by the given monomial: $(p^3q^6 - p^6q^3) \div p^3q^3$
- g) Factorise: $x^4 - (x - z)^4$
- h) Factorise the expressions: $p^2 + 6p - 16$
- i) Work out the division: $96abc (3a - 12) (5b - 30) \div 144 (a - 4) (b - 6)$
- j) Divide: $24(x^2yz + xy^2z + xyz^2)$ by $8xyz$.

4. Answer the following

[30]

- a) Factorize $2x^2 + 5x + 3$.
- b) Factorise : $25a^2 - 4b^2 + 28bc - 49c^2$
- c) Factorize $a^2 - 1 + 2x - x^2$.
- d) Factorize $36x^2 - 12x + 1 - 25y^2$.
- e) Factorize $x^2 + 5x - 36$
- f) Factorize $12x^3y^4 + 16x^2y^5 - 4x^5y^2$
- g) Factorise the expression and divide them as directed: $(m^2 - 14m - 32) \div (m + 2)$
- h) Factorise the expression and divide them as directed: $(5p^2 - 25p + 20) \div (p - 1)$
- i) Factorize $18a^3b^2 + 36ab^4 - 24a^2b^3$
- j) Factorise the expression and divide them as directed: $4yz (z^2 + 6z - 16) \div 2y (z + 8)$