

WORKSHEET MATHEMATICS

CLASS – 8

CHAPTER -14

FACTORISATION

Short Answer type questions:

- 1) Find the common factor in expression $7a^2 - 21a$.
- 2) Find the product of $(3x - y)(3x + y)$.
- 3) Find the number of terms in the expression $a^2 + bc * d$.
- 4) Find the number of terms used for splitting the middle terms in expression

$$x^2 - x - 12$$

- 5) Write the irreducible factors of expression $8xy - 3y$.
- 6) Which number is a factor of every expression but is not specified in factorisation ?

7) Simplify:
$$\frac{(19.1)^2 - (0.9)^2}{20}$$

- 8) What do we get on dividing $x^2 - 1$ by $x - 1$?
- 9) Find the error in the following statement :

$$2x(x-3) = 2x^2 - 3$$

Long Answer type questions:

- 10) Factorise the following:

i) $\frac{1}{4}ab^2 - \frac{1}{2}b^2c$

ii) $(x-y)^2 - 4(x-y)$

iii) $(a^2 - 5b)^2 - 81$

iv) $-4x^2 - 15xy - 11y^2$

v) $19k^2 + 40kl - 59l^2$

vi) $x^2 + \frac{1}{x^2} + 2 - 3x - \frac{3}{x}$

vii) $\frac{1}{64}a^2 - \frac{4}{3}ab + \frac{256}{9}b^2$

11) Simplify:

$$(i) \frac{16m^2 - n^2 - 2n - 1}{4m - n - 1}$$

$$(ii) \frac{(3.9)^2 - (1.7)^2}{(3.9) - (1.7)}$$

$$(iii) \frac{81x^2 - 90xy + 25y^2}{9x - 5y}$$

$$(iv) \frac{0.25a^2 + 2ab + 4b^2}{0.5a + 2b}$$

$$(v) \frac{64a^2 - 1}{8a + 1}$$

ANSWERS:

1) 7a

2) $9x^2 - y^2$

3) two

4) $-4x, 3x$

5) $y(8x-3)$

6) 1

7) 18.2

8) $x+1$

9) $2x(x-3)$

10) i) $\frac{1}{2}b^2(\frac{a}{2} - c)$

ii) $(x-y)(x-y-4)$

iii) $(a^2-5b-9)(a^2-5b+9)$

iv) $-(x+y)(4x+11y)$

v) $(k+1)(19k-59)$

vi) $(x + \frac{1}{x})(x + \frac{1}{x} - 3)$

vii) $(\frac{1}{8}a - \frac{16}{3})(\frac{1}{8}a - \frac{16}{3}b)$

11) i) $(4m+n+1)$

ii) 5.6

iii) $9x-5y$

iv) $0.5a+2b$

v) $8a-1$