EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Factorisation

Grade : ICSE Grade VII

1. Find the number of numbers between 8^2 and 9^2

   (i) 13 (ii) 18 (iii) 15 (iv) 17 (v) 16

2. Find the H.C.F. of $130x^2y^2z^2$ and $50x^3y^2z^2$

   (i) $10x^2y^2z^2$ (ii) $10x^2y^2z^4$ (iii) $650x^3y^2z^2$ (iv) $10x^2y^4z^2$ (v) $10x^3y^2z^2$

3. Factorize $(10x^2-16xy-8y^2)$

   (i) $(5x+2y)(2x+4y)$ (ii) $(5x-2y)(2x+4y)$ (iii) $(5x+2y)(5x+2y)$ (iv) $(5x-2y)(2x-4y)$

   (v) $(5x+2y)(2x-4y)$

4. Which of the following is an irreducible factor of $8x^2y^4z^5$?

   (i) y^3z (ii) $x^2y^3z^4$ (iii) z (iv) x^2y (v) xz^4

5. Factorize (m^4-4096)

   (i) $(m^2+64)(m^2-16)$ (ii) $(m+8)(m-8)(m-8)$ (iii) $(m+8)(m-8)(m^2+64)$

   (iv) $(m+8)(m-8)(m^2-16)$ (v) $(m+8)(m+8)(m-8)$

6. Factorize $(7x+5y)^2 - 2(7x+5y)(2x+9y) + (2x+9y)^2$

   (i) $(-4x+4y)^2$ (ii) $(5x-4y)^2$ (iii) $(6x-4y)^2$ (iv) $(9x+14y)^2$ (v) $(7x+5y)(2x+9y)$

7. Find the H.C.F. of $104xy^2$ and $16x^2y$

   (i) $8x^2y$ (ii) $8xy$ (iii) $8x^4y$ (iv) $8xy^3$ (v) $208x^2y^2$

8. Which of the following is a factor of $(12x^2+yz^3)$?

   (i) $6x^2z^2$ (ii) $6y$ (iii) yz^3 (iv) $12x^2$ (v) no factors

9. Factorize $(25a^2-50ab+10ac+25b^2-10bc+c^2)$

   (i) $(-5a+2b-c)(-5a+2b-c)$ (ii) $(-4a+5b-c)(-4a+5b-c)$ (iii) $(-5a+7b-c)(-5a+7b-c)$

   (iv) $(-5a+5b-c)(-5a+5b-c)$ (v) $(-6a+5b-c)(-6a+5b-c)$

10. Factorize $(x^2+2xa-3x+a^2-3a-28)$

    (i) $(x-a+4)(x+a+7)$ (ii) $(x+a+4)(x+a-7)$ (iii) $(x+a-7)(x-a+4)$ (iv) $(x+a+4)(x-a-7)$

    (v) $(x-a-7)(x+a-4)$

11. Factorize (x^2-100)

(i) $(x+10)(x-10)$ (ii) $(x-2)(x+50)$ (iii) $(x-10)(x-10)$ (iv) $(x+2)(x-50)$ (v) $(x+10)(x+10)$

12. Factorize $(9x^2-100y^2)$

(i) $(3x+20y)(3x-5y)$ (ii) $(3x-20y)(3x+5y)$ (iii) $(3x+10y)(3x+10y)$ (iv) $(3x-10y)(3x-10y)$

(v) $(3x+10y)(3x-10y)$

13. Factorize $36a^3 - 81a$

(i) $(6a-9)(6a^2+9)a$ (ii) $(6a+9)(6a^2+9)a$ (iii) $(6a+9)(9a-6)a$ (iv) $(6a+9)(6a-9)a$

(v) $(6a^2+9)(9a-6)a$

14. Which of the following is a factor of $11x^2y^3z^5$?

(i) x^3z^5 (ii) $11x^2y^4z^5$ (iii) $11x^2z^6$ (iv) $11x^2z^5$

15. Factorize $(4x^3-30x^2+62x-24)$

(i) $(2x-1)(3x-8)(2x-3)$ (ii) $(2x-1)(-x-8)(-x-3)$ (iii) $(2x-1)(x-8)(-3)$

(iv) $(2x-1)(2x-8)(x-3)$ (v) $(2x-1)(4x-8)(4x-3)$

16. Factorize $(ax+by)^2-(ax-by)^2$

(i) $2(ax)^2(by)^2$ (ii) $4(ax)^2(by)^2$ (iii) $2axby$ (iv) $4axby$

17. Factorize $(4a^2-4b^2)$

(i) $(-2a+2b)(-2a-2b)$ (ii) $(-2a-b)(-2a-4b)$ (iii) $(-a+2b)(-a-2b)$ (iv) $(-3a+2b)(-3a-2b)$

(v) $(-2a+5b)(-2a)$

18. Factorize $(9a^2-12ab+4b^2)$

(i) $(-3a+2b)(-3a+2b)$ (ii) $(-2a+2b)(-2a+2b)$ (iii) $(-3a-b)(-3a)$ (iv) $(-3a+5b)(-3a+5b)$

(v) $(-4a+2b)(-4a+2b)$

19. Find the H.C.F. of $152x^2$ and $56x$

(i) $8x^4$ (ii) $8x^3$ (iii) $8x^2$ (iv) $8x$ (v) $1064x^2$

20. Factorize $a^2b^2 - b^2c^2$

(i) $(ab+bc)(ab-bc)$ (ii) $(ab+bc)(ab+bc)$ (iii) $(ab+bc)(ac+bc)$ (iv) $(ac+bc)(ac-bc)$

(v) $(ab-bc)(ab-bc)$

21. Find the H.C.F. of $(x^2+11x+24)$ and $(x^2-6x-27)$

(i) $(x+8)$ (ii) $(x+3)$ (iii) $(x-9)$ (iv) $(2x+8)$ (v) $(2x+3)$

22. Which of the following are true?

a) Every polynomial is a binomial
b) Degree of zero polynomial is zero
c) A binomial has two and only two terms
d) πr^2 is a monomial
e) A binomial may have degree 3

(i) {a,c} (ii) {a,c,d} (iii) {a,b,e} (iv) {b,d} (v) {c,d,e}

23. Factorize $(a+b)^2 - c^2$

(i) $(a+b+c)(a+b-c)$ (ii) $(a+b+c)(a-b-c)$ (iii) $(a+b+c)(a-b+c)$ (iv) $(a+b-c)(a-b-c)$

(v) $(a+b-c)(a-b+c)$

24. Factorize $a^2c^2 - b^2c^2 - a^2d^2 + b^2d^2$

(i) $(a+b)(a-b)(c+d)(b-d)$ (ii) $(a+c)(a-c)(b+d)(b-d)$ (iii) $(a+b)(a-b)(c+d)(c-d)$

(iv) $(a+b)(a-b)(b+d)(c-d)$ (v) $(a+b)(a-c)(c+d)(c-d)$

25. Factorize $(3x^2-18x-48)$

(i) $(x-8)(4x+6)$ (ii) $(x-8)6$ (iii) $(x-8)(6x+6)$ (iv) $(x-8)(2x+6)$ (v) $(x-8)(3x+6)$

Assignment Key

1) (v)	2) (i)	3) (v)	4) (iii)	5) (iii)	6) (ii)
7) (ii)	8) (v)	9) (iv)	10) (ii)	11) (i)	12) (v)
13) (iv)	14) (iv)	15) (iv)	16) (iv)	17) (i)	18) (i)
19) (iv)	20) (i)	21) (ii)	22) (v)	23) (i)	24) (iii)
25) (v)					