EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Factorisation

Grade : SSC Grade VIII

1. The quotient of $(4a^2-12ab+9b^2)\div(2a-3b)$ is

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

2. Factorize $(20x^2-7xy-6y^2)$

   (i) $(5x+2y)(5x-2y)$ (ii) $(5x-2y)(4x+3y)$ (iii) $(5x+2y)(4x-3y)$ (iv) $(5x-2y)(4x-3y)$

   (v) $(5x+2y)(4x+3y)$

3. Factorize $(9a^2-6ab+b^2)$

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

4. Factorize $(a-b)^3+(b-c)^3+(c-a)^3$

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

   (v) $3(a-b)(b+c)(c-a)$

5. Factorize $(x^4-14x^3+40x^2+126x-441)$

   (i) $(x-7)(-2x+3)(-2x-7)(-x-3)$ (ii) $(x-7)(2x+3)(2x-7)(2x-3)$ (iii) $(x-7)(4x+3)(4x-7)(4x-3)$

   (iv) $(x-7)(x+3)(x-7)(x-3)$ (v) $(x-7)3(-7)(-3)$

6. Factorize (x^2-16)

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

7. Factorize $(25a^2+30ab+9b^2)$

   (i) $(-5a-b)(-5a-b)$ (ii) $(-5a-5b)(-5a-5b)$ (iii) $(-6a-3b)(-6a-3b)$ (iv) $(-5a-3b)(-5a-3b)$

   (v) $(-4a-3b)(-4a-3b)$

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

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

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

9. $(12x^4+28x^3-29x^2-60x)\div(6x^2-x-12)$

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

10. The quotient when $(-9j^4+8j^3-8j^2+7j-2)$ is divided by (j^2+6j+8) is

    (i) $(-9j^2+62j-308)$ (ii) $(-7j^2+62j-308)$ (iii) $(-12j^2+62j-308)$ (iv) $(-8j^2+62j-308)$

    (v) $(-10j^2+62j-308)$

11. Which of the following is not an irreducible factor of (x^2y+xy^2+xy) ?

(i) $(x+y+1)$ (ii) y (iii) xy (iv) x

12. $(4x^4-6x^3-28x^2+18x+36)\div(4x^3-14x^2+18)=$

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

13. Factorize $(6a-b)^3+(b-6c)^3+(6c-6a)^3$

(i) $3(6a-b)(b+6c)(6c-6a)$ (ii) $3(6a-b)(b-6c)(6c-6a)$ (iii) $3(6a-b)(b+6c)(6c+6a)$

(iv) $3(6a+b)(b-6c)(6c-6a)$ (v) $3(6a-b)(b-6c)(6c+6a)$

14. Factorize (a^6-b^6)

(i) $(a-b)(a^2+ab+b^2)(a+b)(a^2+ab-b^2)$ (ii) $(a-b)(a^2+ab+b^2)(a+b)(a^2-ab-b^2)$

(iii) $(a-b)(a^2+ab-b^2)(a+b)(a^2-ab+b^2)$ (iv) $(a-b)(a^2-ab+b^2)(a+b)(a^2-ab-b^2)$

(v) $(a-b)(a^2+ab+b^2)(a+b)(a^2-ab+b^2)$

15. Which of the following are true ?

a) If p(a) = 0, then (x + a) perfectly divides p(x)
b) If p(x) is divided by (x - a), the remainder is p(a)
c) If the degree of p(x) is less then the degree of d(x), we should not divide p(x) with d(x)
d) Division of a polynomial with another polynomial stops when the degree of the remainder equals the degree of the divisor

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

16. Which of the following is not a factor of $25x^4y^5z$?

(i) $25x^3y^5z$ (ii) $25x^5y^6z^2$ (iii) $25x^4y^5$ (iv) $25x^4y^4z$ (v) $25xy^5$

17. Factorize $(144x^2-100)$

(i) $(12x+10)(12x+10)$ (ii) $(12x+50)(12x-2)$ (iii) $(12x-50)(12x+2)$ (iv) $(12x-10)(12x-10)$

(v) $(12x+10)(12x-10)$

18. Factorize (s^4-16)

(i) $(s-2)(s+2)(s+2)$ (ii) $(s-2)(s+2)(s^2-4)$ (iii) $(s-2)(s+2)(s^2+4)$ (iv) $(s^2+4)(s^2-4)$

(v) $(s-2)(s-2)(s+2)$

19. Factorize $(24x^3-24x^2y-6xy^2+6y^3)$

(i) $(-6x+3y)(-x+y)(4x-2y)$ (ii) $(-6x+3y)(-x+y)(4x+2y)$ (iii) $(-6x-3y)(-x+y)(4x+2y)$

(iv) $(-6x-3y)(-x+y)(4x-2y)$ (v) $(-6x+3y)(-x-y)(4x-2y)$

20. If $(-3a+2b-5c)\times A=(9a^2-12ab+30ac+4b^2-20bc+25c^2)$, then A =

(i) $(-2a+2b-5c)$ (ii) $(-3a+2b-5c)$ (iii) $(-3a+4b-5c)$ (iv) $(-4a+2b-5c)$ (v) $(-3a-b-5c)$

21. $(8x^3y^3+4x^2y^4)\div 2xy^2 =$

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

22. Factorize (u^4-4096)

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

(v) $(u+8)(u-8)(u^2-16)$

23. Factorize $(x^2+2xa+2x+a^2+2a-24)$

(i) $(x+a+6)(x-a-4)$ (ii) $(x+a-4)(x-a+6)$ (iii) $(x-a-4)(x+a-6)$ (iv) $(x+a+6)(x+a-4)$

(v) $(x-a+6)(x+a+4)$

24. The quotient when $(-k-7)$ is divided by $(k-6)$ is

(i) (-1) (ii) 1 (iii) (-3) (iv) (-2) (v) 0

25. Factorize $a^2-b^2-c^2-2bc$

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

Assignment Key

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