EduSahara™ Assignment

Name : Factorisation Using Identities

Chapter : Factorisation

Grade : SSC Grade VIII

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1. Factorize $(4x^2+22x+28)$

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

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

   (i) $(-5a+6b)(-5a+5b)$ (ii) $(-6a+3b)(-6a+3b)$ (iii) $(-4a+3b)(-4a+3b)$ (iv) $(-5a+3b)(-5a+3b)$

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

3. Factorize $(16a^2-16ab+4b^2)$

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

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

4. Factorize $(4a^2-9b^2)$

   (i) $(-2a+b)(-2a-6b)$ (ii) $(-2a+3b)(-2a-3b)$ (iii) $(-a+3b)(-a-3b)$ (iv) $(-3a+3b)(-3a-3b)$

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

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

   (i) $(5a+3b+c)(5a+3b+c)$ (ii) $(6a+b+c)(6a+b+c)$ (iii) $(5a-2b+c)(5a-b+c)$

   (iv) $(5a+b+c)(5a+b+c)$ (v) $(4a+b+c)(4a+b+c)$

6. Factorize $(5x+7y)^2+2(5x+7y)(6x+8y)+(6x+8y)^2$

   (i) $(x+2y)^2$ (ii) $(11x+15y)^2$ (iii) $(-x-y)^2$ (iv) $(5x+7y)(6x+8y)$ (v) $(12x+15y)^2$

7. Factorize $(7x+9y)^2-2(7x+9y)(5x+4y)+(5x+4y)^2$

   (i) $(7x+9y)(5x+4y)$ (ii) $(3x+5y)^2$ (iii) $(-x-5y)^2$ (iv) $(2x+5y)^2$ (v) $(12x+13y)^2$

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

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

   (v) $(ac+bc)(ac-bc)$

9. Factorize $49a^3-16a$

   (i) $(7a+4)(7a-4)a$ (ii) $(7a+4)(4a-7)a$ (iii) $(7a-4)(7a^2+4)a$ (iv) $(7a^2+4)(4a-7)a$

   (v) $(7a+4)(7a^2+4)a$

10. Factorize (x^2-81)

(i) $(x-27)(x+3)$ (ii) $(x-9)(x-9)$ (iii) $(x+9)(x-9)$ (iv) $(x+9)(x+9)$ (v) $(x+27)(x-3)$

11. Factorize $(121x^2-100)$

(i) $(11x+10)(11x-10)$ (ii) $(11x+10)(11x+10)$ (iii) $(11x-50)(11x+2)$ (iv) $(11x-10)(11x-10)$

(v) $(11x+50)(11x-2)$

12. Factorize $(100x^2-16y^2)$

(i) $(10x-4y)(10x-4y)$ (ii) $(10x-2y)(10x+8y)$ (iii) $(10x+4y)(10x+4y)$ (iv) $(10x+4y)(10x-4y)$

(v) $(10x+2y)(10x-8y)$

13. Factorize (e^4-256)

(i) $(e^2+16)(e^2-8)$ (ii) $(e+4)(e-4)(e^2-8)$ (iii) $(e+4)(e-4)(e-4)$ (iv) $(e+4)(e-4)(e^2+16)$

(v) $(e+4)(e+4)(e-4)$

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

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

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

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

16. 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) $(a-b)(a^2+ab-b^2)(a+b)(a^2-ab+b^2)$

17. 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) $3(a-b)(b+c)(c-a)$

18. Factorize $(5a-2b)^3 + (2b-4c)^3 + (4c-5a)^3$

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

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

19. Factorize $(8a-7b)^3 - (6a-3b)^3 - (2a-4b)^3$

(i) $3(6a+3b)(2a-4b)(8a-7b)$ (ii) $3(6a+3b)(2a+4b)(4a+b)$ (iii) $3(6a+3b)(2a+4b)(8a-7b)$

(iv) $3(6a-3b)(2a-4b)(8a-7b)$ (v) $3(6a-3b)(2a+4b)(8a-7b)$

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

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

Assignment Key

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

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