EduSahara™ Assignment

Name : Factorisation Using Identities

Chapter : Factorization

Grade : ICSE Grade VIII

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1. Factorize $(a^2-10ab+25b^2)$

   (i) $(-5b)(-5b)$ (ii) $(a-2b)(a-2b)$ (iii) $(2a-5b)(2a-5b)$ (iv) $(a-7b)(a-8b)$ (v) $(a-5b)(a-5b)$

2. Factorize $(a^2-10ab+25b^2)$

   (i) $(-2a+5b)(-2a+5b)$ (ii) $5b5b$ (iii) $(-a+5b)(-a+5b)$ (iv) $(-a+2b)(-a+2b)$

   (v) $(-a+8b)(-a+7b)$

3. Factorize (a^2-4b^2)

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

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

4. Factorize $(-8a^3-12a^2b-6ab^2-b^3)$

   (i) $(-3a-b)(-3a-b)(-3a-b)$ (ii) $(-a-b)(-a-b)(-a-b)$ (iii) $(-2a-b)(-2a-b)(-2a-b)$

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

5. Factorize $(8a^3-36a^2b+54ab^2-27b^3)$

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

   (iv) $(3a-3b)(3a-3b)(3a-3b)$ (v) $(2a-3b)(2a-3b)(2a-3b)$

6. Factorize $(16a^2+40ab+16ac+25b^2+20bc+4c^2)$

   (i) $(5a+5b+2c)(5a+5b+2c)$ (ii) $(3a+5b+2c)(3a+5b+2c)$ (iii) $(4a+8b+2c)(4a+8b+2c)$

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

7. Factorize $(-125a^3+125b^3)$

   (i) $(-5a+3b)(25a^2+23ab+25b^2)$ (ii) $(-6a+5b)(24a^2+25ab+25b^2)$

   (iii) $(-5a+7b)(25a^2+27ab+25b^2)$ (iv) $(-4a+5b)(26a^2+25ab+25b^2)$

   (v) $(-5a+5b)(25a^2+25ab+25b^2)$

8. Factorize $(-64a^3-8b^3)$

   (i) $(-5a-2b)(15a^2-8ab+4b^2)$ (ii) $(-3a-2b)(17a^2-8ab+4b^2)$ (iii) $(-4a)(16a^2-5ab+4b^2)$

   (iv) $(-4a-4b)(16a^2-11ab+4b^2)$ (v) $(-4a-2b)(16a^2-8ab+4b^2)$

9. Factorize $(-64a^3+240abc+64b^3+125c^3)$

(i) $(-5a+4b+5c)(15a^2+16ab+20ac+16b^2-20bc+25c^2)$

(ii) $(-4a+6b+5c)(16a^2+19ab+20ac+16b^2-20bc+25c^2)$

(iii) $(-4a+4b+5c)(16a^2+16ab+20ac+16b^2-20bc+25c^2)$

(iv) $(-3a+4b+5c)(17a^2+16ab+20ac+16b^2-20bc+25c^2)$

(v) $(-4a+2b+5c)(16a^2+14ab+20ac+16b^2-20bc+25c^2)$

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10. Factorize $(2x+8y)^2+2(2x+8y)(3x+4y)+(3x+4y)^2$

(i) $(x-3y)^2$ (ii) $(5x+12y)^2$ (iii) $(2x+8y)(3x+4y)$ (iv) $(6x+12y)^2$ (v) $(-x+4y)^2$

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11. Factorize $(8x+3y)^2-2(8x+3y)(4x+6y)+(4x+6y)^2$

(i) $(4x-3y)^2$ (ii) $(5x-3y)^2$ (iii) $(12x+9y)^2$ (iv) $(-3x+3y)^2$ (v) $(8x+3y)(4x+6y)$

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

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

(v) $(ab+bc)(ac+bc)$

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

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

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

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14. 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) $(x+27)(x-3)$

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15. Factorize $(4x^2-36)$

(i) $(2x+9)(2x-4)$ (ii) $(2x-6)(2x-6)$ (iii) $(2x-9)(2x+4)$ (iv) $(2x+6)(2x-6)$ (v) $(2x+6)(2x+6)$

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16. Factorize $(25x^2-100y^2)$

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

(v) $(5x+10y)(5x-10y)$

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17. Factorize (u^4-1296)

(i) $(u+6)(u-6)(u^2-12)$ (ii) $(u+6)(u-6)(u-6)$ (iii) $(u^2+36)(u^2-12)$ (iv) $(u+6)(u-6)(u^2+36)$

(v) $(u+6)(u+6)(u-6)$

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

19. 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) $(a+b)(a-c)(c+d)(c-d)$

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

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

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

Assignment Key

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

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