



1. Factorize $(6x^2 - 13x + 5)$

- (i) $(2x-1)(3x-5)$ (ii) $(2x-1)(6x-5)$ (iii) $(2x-1)(2x-5)$ (iv) $(2x-1)(-5)$ (v) $(2x-1)(4x-5)$

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

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

3. Factorize $(16a^2 + 24ab + 9b^2)$

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

4. Factorize $(9a^2 - 25b^2)$

- (i) $(-2a-5b)(-2a+5b)$ (ii) $(-4a-5b)(-4a+5b)$ (iii) $(-3a-5b)(-3a+5b)$ (iv) $(-3a-2b)(-3a+7b)$
(v) $(-3a-8b)(-3a+2b)$

5. Factorize $(a^2 + 4ab + 4ac + 4b^2 + 8bc + 4c^2)$

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

6. Factorize $(7x+8y)^2 + 2(7x+8y)(4x+6y) + (4x+6y)^2$

- (i) $(11x+14y)^2$ (ii) $(12x+14y)^2$ (iii) $(3x+2y)^2$ (iv) $(-3x-y)^2$ (v) $(7x+8y)(4x+6y)$

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

- (i) $(11x+12y)^2$ (ii) $(-6x-2y)^2$ (iii) $(-7x-2y)^2$ (iv) $(8x+2y)^2$ (v) $(2x+5y)(9x+7y)$

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

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

9. Factorize $81a^3 - 64a$

- (i) $(9a+8)(9a-8)a$ (ii) $(9a+8)(9a^2+8)a$ (iii) $(9a^2+8)(8a-9)a$ (iv) $(9a-8)(9a^2+8)a$
(v) $(9a+8)(8a-9)a$

10. Factorize $(x^2 - 100)$

- (i) $(x-25)(x+4)$ (ii) $(x+10)(x+10)$ (iii) $(x-10)(x-10)$ (iv) $(x+10)(x-10)$ (v) $(x+25)(x-4)$

11. Factorize $(9x^2 - 16)$

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

12. Factorize $(36x^2 - 64y^2)$

- (i) $(6x+8y)(6x-8y)$ (ii) $(6x+16y)(6x-4y)$ (iii) $(6x-8y)(6x-8y)$ (iv) $(6x-16y)(6x+4y)$
(v) $(6x+8y)(6x+8y)$

13. Factorize $(k^4 - 256)$

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

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

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 $(2a-4b)^3 + (4b-3c)^3 + (3c-2a)^3$

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

19. Factorize $(11a-8b)^3 - (5a-3b)^3 - (6a-5b)^3$

- (i) $3(5a-3b)(6a+5b)(11a-8b)$ (ii) $3(5a+3b)(6a+5b)(-a+2b)$ (iii) $3(5a+3b)(6a-5b)(11a-8b)$
(iv) $3(5a-3b)(6a-5b)(11a-8b)$ (v) $3(5a+3b)(6a+5b)(11a-8b)$

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

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

Assignment Key

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

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