



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

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

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

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

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

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

4. Factorize  $(25a^2 - 20ab + 10ac + 4b^2 - 4bc + c^2)$

- (i)  $(-6a+2b-c)(-6a+2b-c)$  (ii)  $(-5a+2b-c)(-5a+2b-c)$  (iii)  $(-5a-c)(-5a-b-c)$   
(iv)  $(-4a+2b-c)(-4a+2b-c)$  (v)  $(-5a+4b-c)(-5a+4b-c)$

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

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

6. Factorize  $4a^3 - 81a$

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

7. Factorize  $(x^2 - 16)$

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

8. Factorize  $(144x^2 - 81)$

- (i)  $(12x-27)(12x+3)$  (ii)  $(12x+9)(12x+9)$  (iii)  $(12x-9)(12x-9)$  (iv)  $(12x+27)(12x-3)$   
(v)  $(12x+9)(12x-9)$

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

- (i)  $(4x+10y)(4x-10y)$  (ii)  $(4x-20y)(4x+5y)$  (iii)  $(4x+10y)(4x+10y)$  (iv)  $(4x-10y)(4x-10y)$   
(v)  $(4x+20y)(4x-5y)$

10. Factorize  $(g^4 - 1296)$

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

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

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

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

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

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

14. Factorize  $(x^4 + 3x^2 + 2)$

- (i)  $(x^2 + 2)(x^2 + 1)$  (ii)  $(x^2 - 2)(x^2 + 1)$  (iii)  $(x^2 + 2)(x^2 - 1)$  (iv)  $(x^2 + 1)(x^2 - 1)$  (v)  $(x^2 - 2)(x^2 - 1)$

## Assignment Key

1) (iii)

2) (iv)

3) (i)

4) (ii)

5) (iv)

6) (ii)

7) (iv)

8) (v)

9) (i)

10) (iv)

11) (iii)

12) (i)

13) (iii)

14) (i)