



1. Factorize  $(4a^2 - 12ab + 9b^2)$

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

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

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

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

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

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

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

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

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

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

- (i)  $(9a+3)(9a^2+3)a$  (ii)  $(9a^2+3)(3a-9)a$  (iii)  $(9a+3)(9a-3)a$  (iv)  $(9a+3)(3a-9)a$   
(v)  $(9a-3)(9a^2+3)a$

7. Factorize  $(x^2 - 81)$

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

8. Factorize  $(64x^2 - 36)$

- (i)  $(8x-2)(8x+18)$  (ii)  $(8x+2)(8x-18)$  (iii)  $(8x-6)(8x-6)$  (iv)  $(8x+6)(8x+6)$  (v)  $(8x+6)(8x-6)$

9. Factorize  $(49x^2 - 81y^2)$

- (i)  $(7x+9y)(7x-9y)$  (ii)  $(7x+9y)(7x+9y)$  (iii)  $(7x+27y)(7x-3y)$  (iv)  $(7x-9y)(7x-9y)$   
(v)  $(7x-27y)(7x+3y)$

10. Factorize  $(w^4 - 256)$

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

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

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

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

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

- (i)  $(x^2+1)(x^2+3)$  (ii)  $(x^2-1)(x^2+3)$  (iii)  $(x^2+3)(x^2-3)$  (iv)  $(x^2-1)(x^2-3)$  (v)  $(x^2+1)(x^2-3)$

## Assignment Key

1) (v)	2) (iv)	3) (iii)	4) (iii)	5) (ii)	6) (iii)
7) (i)	8) (v)	9) (i)	10) (i)	11) (i)	12) (i)
13) (i)	14) (ii)				