



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

2. Factorize $81a^3 - 25a$

- (i) $(9a-5)(9a^2+5)a$ (ii) $(9a+5)(9a^2+5)a$ (iii) $(9a+5)(9a-5)a$ (iv) $(9a+5)(5a-9)a$
(v) $(9a^2+5)(5a-9)a$

3. Which of the following are true?

- a) πr^2 is a monomial
b) A binomial may have degree 3
c) Every polynomial is a binomial
d) A binomial has two and only two terms
e) Degree of zero polynomial is zero
(i) {c,a} (ii) {a,b,d} (iii) {c,e,d} (iv) {e,b} (v) {c,a,b}

4. Factorize $(x^2+2xa+7x+a^2+7a-8)$

- (i) $(x+a+8)(x+a-1)$ (ii) $(x+a+8)(x-a-1)$ (iii) $(x+a-1)(x-a+8)$ (iv) $(x-a+8)(x+a+1)$
(v) $(x-a-1)(x+a-8)$

5. Factorize $(2x^2-2y^2)$

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

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

- (i) $(4x+10y)(4x-10y)$ (ii) $(4x+50y)(4x-2y)$ (iii) $(4x+10y)(4x+10y)$ (iv) $(4x-10y)(4x-10y)$
(v) $(4x-50y)(4x+2y)$

7. Factorize $a^2 - b^2 - c^2 - 2bc$

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

8. Factorize $(25a^2-25b^2)$

- (i) $(-6a-5b)(-6a+5b)$ (ii) $(-5a-3b)(-5a+8b)$ (iii) $(-5a-7b)(-5a+2b)$ (iv) $(-4a-5b)(-4a+5b)$
(v) $(-5a-5b)(-5a+5b)$

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

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

10. Find the H.C.F. of $(x^2 - 14x + 48)$ and $(x^2 - 13x + 40)$

- (i) $(2x - 6)$ (ii) $(2x - 8)$ (iii) $(x - 6)$ (iv) $(x - 5)$ (v) $(x - 8)$

11. Find the number of numbers between 5^2 and 6^2

- (i) 10 (ii) 9 (iii) 11 (iv) 13 (v) 8

12. Which of the following gives the H.C.F of two or more polynomials?

- (i) (H.C.F. of numerical coefficients) \times (Each common factor raised to the highest power)
(ii) (Product of numerical coefficients) \times (Each common factor raised to the highest power)
(iii) (Product of numerical coefficients) \times (Each common factor raised to the lowest power)
(iv) (H.C.F. of numerical coefficients) \times (Each common factor raised to the lowest power)

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

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

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

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

15. Factorize $(35x^2 - 41xy - 24y^2)$

- (i) $(7x + 3y)(7x - 3y)$ (ii) $(7x + 3y)(5x - 8y)$ (iii) $(7x - 3y)(5x + 8y)$ (iv) $(7x - 3y)(5x - 8y)$
(v) $(7x + 3y)(5x + 8y)$

16. Factorize $(4x^2 - 16)$

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

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

- (i) $(-2x + y)^2$ (ii) $(6x + 15y)^2$ (iii) $2x^2$ (iv) $(2x + 8y)(4x + 7y)$ (v) $(7x + 15y)^2$

18. Which of the following is an irreducible factor of $42x^4y^5z^5$?

- (i) xz^2 (ii) $x^2y^3z^2$ (iii) x (iv) y^3z (v) x^2y

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

- (i) $(-a + 2b)(-a + 2b)$ (ii) $2b2b$ (iii) $(-a + 4b)(-a + 5b)$ (iv) $(-a)(-a - b)$ (v) $(-2a + 2b)(-2a + 2b)$

20. Factorize $(18a^2b + 8ab^2)$

- (i) $2ab(9a + 4b)$ (ii) $2b(9a - 4b)$ (iii) $2ab(9a - 4b)$ (iv) $2ab(-9a - 4b)$ (v) $2a(9a + 4b)$

21. Which of the following is not a factor of $21x^3y^5z^5$?

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

22. Which of the following is not an irreducible factor of (x^2y+xy^2+xy) ?

- (i) xy (ii) $(x+y+1)$ (iii) y (iv) x

23. Factorize $(x^3+6x^2-51x-280)$

- (i) $(x+5)(-7)8$ (ii) $(x+5)(2x-7)(2x+8)$ (iii) $(x+5)(-x-7)(-2x+8)$ (iv) $(x+5)(x-7)(x+8)$
(v) $(x+5)(4x-7)(4x+8)$

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

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

25. Factorize $(24xy+40y^2)$

- (i) $8x(3x+5y)$ (ii) $8y(-3x-5y)$ (iii) $8y(3x-5y)$ (iv) $8y(3x+5y)$ (v) $8x(3x-5y)$

Assignment Key

1) (ii)	2) (iii)	3) (ii)	4) (i)	5) (v)	6) (i)
7) (iii)	8) (v)	9) (iii)	10) (v)	11) (i)	12) (iv)
13) (ii)	14) (iv)	15) (ii)	16) (iv)	17) (ii)	18) (iii)
19) (i)	20) (i)	21) (iii)	22) (i)	23) (iv)	24) (v)
25) (iv)					