

EduSahara™ Learning Center Assignment**Grade : Class VIII, CBSE****Chapter : Factorisation****Name : Factorisation Using Identities****Licensed To : Teachers and Students for non-commercial use**

1. Factorize ($a^2 - 8ab + 16b^2$)

(i) $(a - 2b)(a - b)$

(ii) $(2a - 4b)(2a - 4b)$

(iii) $(a - 6b)(a - 6b)$

(iv) $(a - 4b)(a - 4b)$

(v) $(-4b)(-4b)$

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

(i) $(-a - 6b)(-a - 6b)$

(ii) $(-a - b)(-a - b)$

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

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

(v) $(-3b)(-3b)$

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

(i) $4a(4a - 5b)$

(ii) $(3a + 2b)(3a - 2b)$

(iii) $(4a + 4b)(4a + b)$

(iv) $(5a + 2b)(5a - 2b)$

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

4. Factorize ($25a^2 + 30ab - 10ac + 9b^2 - 6bc + c^2$)

(i) $(-5a - b + c)(-5a - b + c)$

(ii) $(-5a - 5b + c)(-5a - 5b + c)$

(iii) $(-4a - 3b + c)(-4a - 3b + c)$

(iv) $(-5a - 3b + c)(-5a - 3b + c)$

(v) $(-6a - 3b + c)(-6a - 3b + c)$

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

(i) $(ab + bc)(ac + bc)$

(ii) $(ab + bc)(ab - bc)$

(iii) $(ac + bc)(ac - bc)$

(iv) $(ab + bc)(ab + bc)$

(v) $(ab - bc)(ab - bc)$

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

(i) $(8a^2 + 3)(3a - 8)a$

(ii) $(8a + 3)(8a - 3)a$

(iii) $(8a + 3)(8a^2 + 3)a$

(iv) $(8a + 3)(3a - 8)a$

(v) $(8a - 3)(8a^2 + 3)a$

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

(i) $(x + 10)(x + 10)$

(ii) $(x - 5)(x + 20)$

$$(iii) (x + 5)(x - 20)$$

$$(iv) (x - 10)(x - 10)$$

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

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

$$(i) (4x - 2)(4x + 8)$$

$$(ii) (4x + 4)(4x + 4)$$

$$(iii) (4x - 4)(4x - 4)$$

$$(iv) (4x + 2)(4x - 8)$$

$$(v) (4x + 4)(4x - 4)$$

9. Factorize $(16x^2 - 81y^2)$

$$(i) (4x + 9y)(4x - 9y)$$

$$(ii) (4x + 9y)(4x + 9y)$$

$$(iii) (4x - 9y)(4x - 9y)$$

$$(iv) (4x - 27y)(4x + 3y)$$

$$(v) (4x + 27y)(4x - 3y)$$

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

$$(i) (d^2 + 16)(d^2 - 8)$$

$$(ii) (d + 4)(d - 4)(d^2 - 8)$$

$$(iii) (d + 4)(d - 4)(d - 4)$$

$$(iv) (d + 4)(d - 4)(d^2 + 16)$$

$$(v) (d + 4)(d + 4)(d - 4)$$

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 $a^2c^2 - b^2c^2 - a^2d^2 + b^2d^2$

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

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

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

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

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

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 $(x^4 - x^2 - 2)$

$$(i) (x^2 + 1)(x^2 - 1)$$

$$(ii) (x^2 - 2)(x^2 - 1)$$

$$(iii) (x^2 + 2)(x^2 - 1)$$

$$(iv) (x^2 - 2)(x^2 + 1)$$

$$(v) (x^2 + 2)(x^2 + 1)$$

Assignment Key

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