



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



**Sub: Algebra and Geometry**

**Class: 7**

**Date: 21.06.21**

**Duration: 40 min**

**Worksheet 29**

**Full Marks: 15**

## Special Products

**Choose the correct option:**

1.  $(x - 8)(x - 8) =$  \_\_\_\_\_

- a.  $x^2 - 64$
- b.  $x^2 + 64$
- c.  $x^2 - 16x + 64$
- d.  $x^2 + 16x + 64$

2. If  $a + b = 5$  and  $ab = 6$ , find  $a^2 + b^2$ .

- a. 13
- b. 12
- c. 10
- d. 11

3. The square of  $x^2 - 2y^2$  is \_\_\_\_\_

- a.  $x^4 - 4x^2y^2 + 4y^4$
- b.  $x^4 + 4x^2y^2 + 4y^4$
- c.  $x^4 - 4x^2y^2 - 4y^4$
- d. None of the above

4. Which of the following expression is equivalent to the expression  $(y - x + 3)(y + x - 3)$ ?

- a.  $y^2 - (x - 3)^2$
- b.  $(y - x)^2 - 9$
- c.  $x^2 - (y + 3)$
- d.  $(x + y)^2 - 9$

5. Expand  $(4x - 5)(4x + 5)$ .

- a.  $4x^2 - 25$
- b.  $4x^2 + 25$
- c.  $16x^2 + 25$
- d.  $16x^2 - 25$

6. Which of the following expressions is equivalent to the expression  $945 \times 855$ ?

- a.  $900^2 - 45^2$
- b.  $900^2 + 45^2$
- c.  $900^2 + (45 + 55)900 + (45 \times 55)$
- d.  $800^2 + (45 + 55)800 + 45 \times 55$

7. Simplify  $(a - b + c)(a + b + c)$

- a.  $a^2 + 2ab + b^2 - c^2$
- b.  $a^2 + 2ac + c^2 - b^2$
- c.  $a^2 + 2bc - c^2 - b^2$
- d.  $a^2 + 2ac + c^2 - b^2$

8. Expand  $(x-4)^2$ .

- a.  $x^2 - 8x + 16$
- b.  $x^2 - 8x - 16$
- c.  $x^2 + 8x + 16$
- d.  $x^2 - 16$

9. Solve  $(x - 1)(1 - x)$  using suitable identity

- a.  $x^2 + x - 1$
- b.  $x^2 - 2x - 1$
- c.  $-x^2 + 2x - 1$
- d.  $x^2 - x - 1$

10. The simplified form of the expression  $(y^2 + 5)(y^2 - 3)$  is

- a.  $y^4 - 3y^2 - 15$
- b.  $y^4 + 2y^2 + 15$
- c.  $y^4 - 3y^2 + 15$
- d.  $y^4 + 2y^2 - 15$

11. Simplify the following product  $(zx - y)(zx + k)$  using suitable identity.

- a.  $z^2x^2 + (y - k)zx - ky$
- b.  $z^2x^2 + (k - y)zx - ky$
- c.  $z^2x^2 + (k - y)zx + ky$
- d.  $z^2x^2 + (y - k)zx + ky$

12. Expand  $(x + 1)^2$ .

- a.  $x + 1$
- b.  $x^2 + 1$
- c.  $x^2 + 2x + 1$
- d.  $x^2 + 1^2$

13. Expand  $(3x - 2)^2$ .

- a.  $3x^2 - 12x - 4$
- b.  $3x^2 - 12x + 4$
- c.  $9x^2 - 12x + 4$
- d.  $9x^2 - 12x - 4$

14. Expand  $(3x - \frac{1}{2})(3x + \frac{1}{2})$ .

- a.  $9x^2 - \frac{1}{2}$
- b.  $9x^2 - \frac{1}{4}$
- c.  $9x^2 + \frac{1}{2}$
- d.  $9x^2 + \frac{1}{4}$

15. Expand  $(x + 5)(x - 5)$ .

- a.  $x^2 - 5$
- b.  $x^2 + 5$
- c.  $x^2 + 25$
- d.  $x^2 - 25$