



# ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

**CLASS 8**

**SUBJECT :Algebra & GeometryWork sheet7**

**Marks:15Algebraic Identities**

**Date:6.2.21**

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**Answer all the following questions(1×15=15)**

1.  $(x-a)(x+b) =$  \_\_\_\_\_

- A)  $x^2+(b-a)x-ab$
- B)  $x^2-(a-b)x+ab$
- C)  $x^2+b-ax-a$
- D) none of these

2.  $(a-b)^2 =$  \_\_\_\_\_

- A)  $(a+b)2(a-b)^2$
- B)  $(a+b)^4(a-b)^4$
- C)  $a^4-b^4$
- D) none of these

3.  $a^2-b^2 =$  \_\_\_\_\_

- A)  $(a+b)^2+2ab$
- B)  $(a+b)^2-2ab$
- C)  $a^2 - b^2 +2ab$
- D)  $(a+b)(a-b)$

4. What must be added to  $x^4 + 1/x^4$  to make it a perfect square?

- A) 0
- B) 2

C)6

D)5x

5.  $(ab - c)^2 = \underline{\hspace{2cm}}$

A)  $a^2b^2c^2 + a^4b^4c^4 - 2a^3b^3c^3$

B)  $a^2b^2c^2 + a^4b^4c^4 + 2a^3b^3c^3$

C)  $a^2b^2c^2 - a^4b^4c^4 - 2a^3b^3$

D)  $a^2b^2+c^2-2abc$

6. If  $x + 1/x = 5$ , find  $x^2 + 1/x^2$

A) 1, -1

B) 2

C) 23

D) 5

7. If  $x^2 + 1/x^2 = 2$ ,  $x^2 - 1/x^2 = -3$  find  $x^4 - 1/x^4$

A) -6

B) 2

C) 4

D) 2/3

8.  $a + b = 2$ ,  $a - b = 4$  find  $b^2$

A) 10

B) 12

C) 1

D) -1

9.  $(2x^2-4y^2)(2y^2+3x^2)=$  \_\_\_\_\_

A)  $-8x^2y^2 + 6x^4 - 8y^4$

B)  $8x^2y^2 + 6x^4 - 8y^4$

C)  $8x^2y^2 - 6x^4 + 8y^4$

D) none of these

10. If  $x^2 - 6x + 1 = 0$ , find the value of  $x^2 + 1/x^2$

A) 34

B) 43

C) 64

D) 96

11. If  $x - 1/x = 2$ , find the value of  $x^2 - 2x - 1$

A) 1

B) 0

C) 20

D) none of these

12.  $(x+y+z)^2 =$  \_\_\_\_\_

A)  $x^2+y^2+z^2+2xy+2xz+2zy$

B)  $x^2-y^2+z^2+2xy-2xz-2zy$

C)  $x^2-y^2+z^2+2xy-2xz+2zy$

D) none of these

13.  $(a-b)^2 = (a+b)^2 - \underline{\hspace{2cm}}$

A) 2

B)  $4ab$

C) 0

D) none of these

14.  $(\frac{1}{17}a + 0.4b^2)(\frac{1}{17}a - 0.4b^2) = \underline{\hspace{2cm}}$

A)  $\frac{1}{289}a^2 - 0.16b^4$

B)  $\frac{1}{289}a^2 + 0.16b^4$

C)  $289a^2 + 0.16b$

D) none of these

15.  $a^2 + b^2 = 5$ ,  $a^2 - b^2 = 13$ ,  $a = ?$

A) 3, -3

B) 4, -4

C) 6

D) none of these

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