



# ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

**CLASS 8**

**SUBJECT :Algebra & GeometryWork sheet5**

**Marks:15Algebraic Identities**

**Date:21.11.20**

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

1.  $(x+4)(x+2) =$  \_\_\_\_\_

- A)  $x^2+6x+8$
- B)  $x^2-6x-8$
- C)  $x^3+6x+8$
- D) none of these

2.  $(y+3)^2 =$

- A)  $y^2+6y+9$
- B)  $y^2-9y+6$
- C)  $y^2+9$
- D) none of these

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

- A)  $4ab$
- B)  $2ab$
- C)  $ab$
- D) None of these

4. What must be added to  $49x^2-42x$  to make it a perfect square

A) 9

B)  $9/10$

C) -4

D) 0

5.  $(99)^2 = \underline{\hspace{2cm}}$

A) 9809

B) 9801

C) 8091

D) 8649

6. If  $a+b=3$ ,  $ab=2$ , find  $a-b$

A) 1, -1

B) 1

C) -1

D) none of these

7. Find  $a^2 + b^2$ , if  $a+b=10$ ,  $a-b=2$

A) 52

B) 62

C) 42

D)  $\frac{2}{3}$

8. If  $x - \frac{1}{x} = 3$ , find  $x^2 + \frac{1}{x^2}$

A) 11

B) 12

C) 13

D) 0

9.  $(x-y)(x+y)(x^2+y^2) = \underline{\hspace{2cm}}$

A)  $x^4 - y^4$

B)  $x^4 + y^4$

C)  $x^3 + y^3$

D) none of these

10. Find the value of  $102 \times 98$  using identities

A) 9996

B) 996

C) 1996

D) 9096

11.  $1003^2 - 997^2 = \underline{\hspace{2cm}}$

A) 12000

B) 1200

C) 2000

D) none of these

12.  $687 \times 687 - 313 \times 313 = \underline{\hspace{2cm}}$

A) 374000

B) 37400

C) 374400

D) none of these

13.  $(a+b)(a-b)=$ \_\_\_\_\_

A)  $a^2-b^2$

B)  $a^2+b^2$

C)  $a^3-b^3$

D) none of these

14.  $(9a+10b)(9a-10b)=$ \_\_\_\_\_

A)  $81a^2-100b^2$

B)  $81a+100b$

C)  $81+100b^2$

D) none of these

15.  $(3x+5)(2x+7)=$ \_\_\_\_\_

A)  $6x^2+31x+35$

B)  $6x^2-30x+30$

C)  $x^2+31x+35$

D) none of these

**Indranil Ghosh**

