ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Sub: Algebra and Geometry **Class: 7** **Date: 10.06.20**

Duration: 40 min **Worksheet 28** **Full Marks: 15**

ALGEBRAIC EXPRESSION

Choose the Correct options:

1. Subtract and simplify. $(2a^2b - 3ab^2 + 5a^2b^2) - (2a^2b^2 + 4a^2b - 5b^2)$

a. $-4a^2b - 3ab^2 + 3a^2b^2 + 5b^2$
b. $-2a^2b - 5ab^2 + 3a^2b^2 + b^2$
c. $-5a^2b - 2ab^2 + 3a^2b^2 + 5b^2$
d. $-2a^2b - 3ab^2 + 3a^2b^2 + 5b^2$

2. Subtract 2ab from −2ab.

a. 4ab
b. ab
c. 2ab
d. −4ab

3. If the length of a rectangle in terms of x is $3x^2 + 7x + 9$, and its width is $3x + 6$, what is the perimeter of this rectangle? Don't leave any spaces in your solution.
Perimeter: ___ units

a. $4(3x^2+20x+15)$
b. $2(3x^2+10x+15)$
c. $3(3x^2+10x+15)$
d. $2(3x^2+10x+30)$

4. If the length of a rectangle in terms of x is $5x^2 + 3x + 6$, and its width is $7x + 9$, what is the perimeter of this rectangle?
Perimeter: ___ units

a. $20x^2+20x+30$
b. $10x^5+20x+30$
c. $10x^2+2x+3$
d. $10x^2+20x+30$

5. Find the difference between the two polynomials by subtracting vertically
$(7x^3 - 5x + 8) - (4x^3 - 2x + 1)$

a. $3x^3 + 3x - 7$
b. $3x^3 - 7x - 7$
c. $3x^3 - 3x + 7$
d. $3x^3 - 7x + 7$

6. Find the sum of the two polynomials by adding horizontally
$(2x^3 + 3x^2 - 5) + (3x^2 + 7)$

a. $2x^3 + 6x^2 + 2$
b. $2x^3 + 6x^2 - 12$

c. $2x^3 + 2$
d. $8x^2 + 2$

7. Find the sum of the two polynomials by adding horizontally
$(5x^2 - 3) + (8x^2 - 1)$

a. $13x^2 - 4$
b. $13x^2 + 2$
c. $-3x^2 + 2$
d. $3x^2 - 4$

8. Find the sum of the two polynomials by adding horizontally
$(7x^2 - 1) + (2x^2 + 7)$

a. $9x^2 + 6$
b. $2x^3 + 6x^2 - 12$
c. $8x^2 + 2$
d. $2x^3 + 2$

9. Add and simplify. $(x-3) + (-5x + 8) + (-8x - 1)$
a. $-2x + 3$
b. $-12x + 4$
c. $-7x + 2$
d. $2x - 8$

10. Find the difference: $(2r^2 + 6r + 7) - (3r^2 + 5r + 8)$

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

11. Which of the following is obtained by subtracting x^2-y^2 from y^2 - x^2?

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

12. Find the sum. $(3 - 2x + 2x^2) + (4x - 5 + 3x^2)$

a. $7x - 7x + 5x^2$
b. $5x^2 + 2x - 2$
c. $5x^2$
d. $5x^2 + 6x + 8$

13. Find the sum. $(2x^2 + 5x - 7) + (3 - 4x^2 + 6x)$

a. $2x^2 + 3x + 1$
b. $-2x^2 - 11x - 4$

c. $2x^2 + 5x - 7$
d. $-2x^2 + 11x - 4$

14. Find the difference. $(3 - 2x + 2x^2) - (4x - 5 + 3x^2)$

a. $x^2 + 6x + 8$
b. $2x^2 + 5x - 7$
c. $-x^2 - 6x + 8$
d. $-2x^2 + 11x - 4$

15. Simplify the expression. $(6x + 4x^4 - 3x^2) + (7x^4 + 5x^2 + 8x)$

a. $11x^4 + 2x^2 + 14x$
b. $16x^4 + x^2 + 14x$
c. $11x^4 + x^2 + 14x$
d. $11x^4 + 2x^2 + 10x$