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Algebra 2

## *Operations with Polynomials*

1. What is the expression  $(x^2 - 5x - 2) + (-6x^2 - 7x - 3)$  equivalent to in simplest terms?

2. If  $A = -2x^2 + 5x - 7$  and  $B = 7x^2 + 3x + 2$ , What is  $A - B$ ?

3. If  $A = -2x^2 + 5x - 7$  and  $B = 7x^2 + 3x + 2$ , What is  $B - A$ ?

4. What is the result when  $5m^3 + 3m - 1$  is subtracted from  $7m^2 - 5m + 1$ ?

5. What is the result when  $7xy + 5y - 2x$  is subtracted from  $9xy - 5y$ ?

6. What is the result when  $9g^2 - 8g - 2$  is subtracted from  $7g^3 + 8g$ ?

7. Which expression is equivalent to  $-3x(x - 4) - 2x(x + 3)$ ?

8. Which expression represents  $\frac{12x^3 - 6x^2 + 2x}{2x}$  in simplest form?

9. What is the product of  $-3x^2y$  and  $(5xy^2 + xy)$ ?

10. The quotient of  $\frac{8x^5 - 2x^4 + 4x^3 - 6x^2}{2x^2}$  is

11.  $(x^2 + 2x - 4)(x + 3)$

12.  $(2x^2 + 3x - 2)(x - 2)$

13.  $(3x^2 + x - 5)(x - 4)$

14.  $(2y^2 - 3y - 1)(y + 7)$

15. Express  $MP$  in simplest terms if  $M = 2x^2 + 6$  and  $P = x^2 + 3x - 1$ .

16. Find the area of a rectangle whose length is  $x^2 - 6x + 2$  and width is  $3x^2 + 3$  in simplest terms.