

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Per: \_\_\_\_\_

# Polynomials Study Guide

*Standards:*

*A 505-Add, subtract, and multiply polynomials*

*A 605-Solve quadratic equations*

1. The expression  $-8x^3(7x^6 - 3x^5)$  is equivalent to (*simplify*):

Skills Needed:

2.  $t^2 - 59t + 54 - 82t^2 + 60t$  is equivalent to (*simplify*):

Skills Needed:

3. The expression  $(4x + 3)(x - 2)$  is equivalent to:

Skills Needed:

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4. Which of the following is an equivalent simplified expression for  $2(4x+7)-3(2x-4)$ .

Skills Needed:

5. What polynomial must be added to  $x^2-2x+6$  so that the sum is  $3x^2+7x$ ?

Skills Needed:

6. For all  $x$ ,  $(3x+7)^2 =$

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7. What polynomial must be added to  $x^2 - 2x + 6$  so that the sum is  $3x^2 + 7x$  ?

Skills Needed:

8. The expression  $(3x - 4y^2)(3x + 4y^2)$  is equivalent to:

Skills Needed:

9.  $(a + 2b + 3c) - (4a + 6b - 5c)$  is equivalent to:

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10. What is the factored form of the expression  $5x^2 - 13x - 6$ ?

Skills Needed:

11. If  $2x^2 + 6x = 36$  what are the possible values of  $x$ ?

Skills Needed:

12. What values of  $x$  are solutions for  $x^2 + 2x = 8$ ?

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13. When  $(2x+4)^2$  is written in the format  $ax^2+bx+c$ , where  $a$ ,  $b$ , and  $c$  are integers, what is the value of  $a+b-c$  ?

Skills Needed:

14. What is the sum of the 2 solutions of the equation  $x^2+5x-24=0$ ?

Skills Needed:

15. What is the product of the solutions of the expression  $x^2-5x-14=0$  ?

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16. Provide the roots of the equation:  $y^2 - 4y - 5 = 7$ .

Skills Needed:

**Skills Needed:**

Add/Subtract Polynomials

Multiply Polynomials

Factor Quadratic

Find Solution(s) to Quadratic