

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

**Multiply the Monomials.****Example:**  $3x^2y^3 \cdot 4xy^2 = 12x^3y^5$ .

1.  $3x^2 \cdot (-2xy)$  \_\_\_\_\_ 5.  $5x^2 \cdot (4x)$  \_\_\_\_\_

2.  $(-st^2)(st)$  \_\_\_\_\_ 6.  $(-9x^2)(-3y^2)$  \_\_\_\_\_

3.  $9xyz \cdot (9x^2y^3z)$  \_\_\_\_\_ 7.  $(8a^3b^2c)(-2ac)(3bc^2)$  \_\_\_\_\_

4.  $(3xy) \cdot \frac{1}{3}xyz$  \_\_\_\_\_ 8.  $(xy)(-xy)(yz^2)$  \_\_\_\_\_

**Multiply the Polynomials.****Example:**  $(x+1)(x^2 - 2x + 3) = x^3 - x^2 + x + 3$  (Distributive Property or "multiply like numbers").

9.  $2x^3(x+3)$  \_\_\_\_\_ 13.  $(x+1)(x-1)$  \_\_\_\_\_

10.  $-s^2t^2(s+1)$  \_\_\_\_\_ 14.  $(-t+3)(-t-3)$  \_\_\_\_\_

11.  $(x-7)(x+1)$  \_\_\_\_\_ 15.  $x^2(x+y)$  \_\_\_\_\_

12.  $x(3x-3)$  \_\_\_\_\_ 16.  $(x+3)^2$  \_\_\_\_\_

**Multiply or Divide the Polynomials. Write answers in Standard Form.**

17.  $(x^2 + 2x + 3) \cdot (x - 4)$  \_\_\_\_\_

18.  $(x^2 - 4x + 3) \div (x - 1)$

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19.  $(x^3 - 2x^2 - 3x + 6) \div (x - 2)$

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20.  $x - 2 \overline{)x^2 - 4x + 4}$

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21.  $(x^2 + 1)(x^2 - 1)$

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22.  $(y^3 - y^2 + y) \cdot (2y^2 + 3y)$

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