

**Algebra 1**

Name \_\_\_\_\_

**Modules 17 and 18 Practice**

Carefully complete each of the following and have your paper checked at each break line before moving forward.

<p>1. Write the polynomial so that the exponents decrease from left to right. Then, state the leading coefficient:</p> $6x^3 - 6x + 4x^5 - 2$	<p>2. Classify the expression <math>-9v^9 - 7</math> by the number of terms and state its degree.</p>
<p>3. Which expression is a polynomial?</p> <p>a. <math>\frac{1}{4}r^5 + \frac{r+4}{3}</math>                      c. <math>\frac{4}{5}r^2 + \frac{5^4}{r}</math></p> <p>b. <math>\frac{r-5}{r+4} + \frac{4}{r}</math>                              d. <math>5r^4 - r + 4^r</math></p>	<p>4. Explain the meaning of the words monomial, binomial, and trinomial. Give an example of each.</p>

**Find the sum or difference:**

<p>5. <math>(2a^7 + 3a^3 - 6) + (-2a^3 + 4 + 6a^7)</math></p>	<p>6. <math>(8x^3 + 4x^2) - (-5x^2 + 3 + x^3)</math></p>
<p>7. <math>(5q^5 + 4) - (2q^3 + 9) + (6q^5 - q^3)</math></p>	

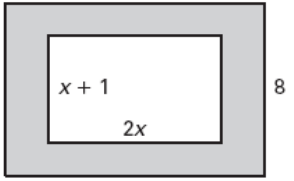
**Find the product:**

<p>8. <math>3x^2(4 - x^2)</math></p>	<p>9. <math>(8x - 3)(8x + 3)</math></p>
<p>10. <math>(6y^2 + 3y + 2)(y - 7)</math></p>	<p>11. <math>(4x - 3)^2</math></p>

**Mixed Practice. Pay close attention to the operation when simplifying!**

12. $(x+5)(x+2)$	13. $(-5x^2 + 7x - 2) + (2 - 3x + 4x^2)$
14. $(5x^2 - 5)^2$	15. $-3x^2(2x^2 - 5x - 3)$
16. $(4x + 7y)^2$	17. $(x+5)(x^2 - 2x + 3)$

---

18. $(3x^2 + 5x - 7) - 2(4x^2 - 5)$	19. $(5x - 2) - (2x - 3)(3x - 4)$
20. $(2x)(5x + 3)^2$	21. Write a polynomial that represents the shaded area only: 

---