

Algebra 1B

Name _____

9.1-9.3 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: $4x^5 + 6x^3 - 6x - 2$</p> <p>$6x^3 - 6x + 4x^5 - 2$</p> <p style="text-align: center;">LC: 4</p>	<p>2. Classify the expression $-9v^9 - 7$ and state its degree. Binomial ; D: 9</p>
<p>3. Which expression is a polynomial?</p> <p>a. $\frac{1}{4}r^5 + \frac{r+4}{3}$ c. $\frac{4}{5}r^2 + \frac{5^4}{r}$</p> <p>b. $\frac{r-5}{r+4} + \frac{4}{r}$ d. $5r^4 - r + 4r$</p>	<p>4. Explain the meaning of the words monomial, binomial, and trinomial. Give an example of each.</p> <p>Monomial - Product of numbers and variables w/ whole # exponents: $5x^2$</p> <p>Binomial - Sum of 2 monomials: $5x^2 + 3x$</p> <p>Trinomial - Sum of 3 monomials: $5x^2 + 3x + 2$</p>

Find the sum or difference:

<p>5. $(2a^7 + 3a^3 - 6) + (-2a^3 + 4 + 6a^7)$</p> <p>$8a^7 + 1a^3 - 2$</p>	<p>6. $(8x^3 + 4x^2) - (-5x^2 + 3 + x^3)$</p> <p>$8x^3 + 4x^2 + 5x^2 - 3 - x^3$</p> <p>$7x^3 + 9x^2 - 3$</p>
<p>7. $(5q^5 + 4) - (2q^3 + 9) + (6q^5 - q^3)$</p> <p>$5q^5 + 4 - 2q^3 - 9 + 6q^5 - q^3$</p>	<p>$11q^5 - 3q^3 - 5$</p>

Find the product:

<p>8. $3x^2(4 - x^2)$</p> <p>$12x^2 - 3x^4$</p>	<p>9. $(8x - 3)(8x + 3)$</p> <p>$64x^2 - 9$</p>
<p>10. $(6y^2 + 3y + 2)(y - 7)$</p> <p>$6y^3 + 3y^2 + 2y$ $-42y^2 - 21y - 14$</p> <hr/> <p>$6y^3 - 39y^2 - 19y - 14$</p>	<p>11. $(4x - 3)^2$</p> <p>$(4x - 3)(4x - 3)$</p> <p>$16x^2 - 24x + 9$</p>

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

<p>12. $(x+5)(x+2)$</p> $x^2 + 7x + 10$	<p>13. $(-5x^2 + 7x - 2) + (2 - 3x + 4x^2)$</p> $-1x^2 + 4x$
<p>14. $(5x^2 - 5)^2$</p> $(5x^2 - 5)(5x^2 - 5)$ $25x^4 - 50x^2 + 25$	<p>15. $-3x^2(2x^2 - 5x - 3)$</p> $-6x^4 + 15x^3 + 9x^2$
<p>16. $(4x + 7y)^2$</p> $(4x + 7y)(4x + 7y)$ $16x^2 + 56xy + 49y^2$	<p>17. $(x+5)(x^2 - 2x + 3)$</p> $x^3 - 2x^2 + 3x$ $+ 5x^2 - 10x + 15$ <hr/> $x^3 + 3x^2 - 7x + 15$

<p>18. $(3x^2 + 5x - 7) - 2(4x^2 - 5)$</p> $3x^2 + 5x - 7 - 8x^2 + 10$ $\boxed{-5x^2 + 5x + 3}$	<p>19. $(5x - 2) - (2x - 3)(3x - 4)$</p> $5x - 2 - (6x^2 - 7x + 12)$ $5x - 2 - 6x^2 + 7x - 12$ $\boxed{-6x^2 + 22x - 14}$
<p>20. $(2x)(5x + 3)^2$</p> $(2x)(5x + 3)(5x + 3)$ $2x(25x^2 + 30x + 9)$ $\boxed{50x^3 + 60x^2 + 18x}$	<p>21. Write a polynomial that represents the shaded area only:</p> $12(8) - 2x(x+1)$ $96 - 2x^2 - 2x$ $\boxed{A = -2x^2 - 2x + 96}$ 