

Chapter 5
Form A

For problems 1 – 2, identify each polynomial as a monomial, binomial, or trinomial. Give the degree of the polynomial.

1. $7x^4 - 4x^2$ 1. _____

2. $8x^3y^2 - 5x^2y + 3x$ 2. _____

For problems 3 – 6, add or subtract as indicated.

3. $(7x^5 - 4x^3 + 3x^2 - 4x) + (6x^3 - 2x^2 + 2x)$ 3. _____

4. $(5x^2 - 4xy + 2y) - (-x^2 + xy - 2y)$ 4. _____

5. Subtract $11x^3 - 8x + 3$ from $9x^3 + 3x^2 - 2$ 5. _____

6. Add $14y^4 - 5y^3 + 18y^2 - 4y + 2$
 $+ \underline{\quad y^3 - 4y^2 + 5y - 5 \quad}$ 6. _____

For problems 7 – 14, simplify each expression.

7. $y^7 \cdot y^4$ 7. _____

8. $(-9y^3)^4$ 8. _____

9. $55x^0$ 9. _____

10. $(3x^{-3})^2(7x^4)$ 10. _____

11. $(3x^2y^{-3})(-5x^{-1}y^4)^2$ 11. _____

12. $\left(\frac{5x^2y^4}{2xy^6}\right)^2$ 12. _____

13. $3^{-2} + 2^{-1}$ 13. _____

14. $\frac{x^6 \cdot x^{-2}}{x^{-4}}$ 14. _____

Name _____

Date _____

For problems 15 – 19, find each product.

15. $-3x^2y(6x^4y^3 - 5x^3y + 4y)$ 15. _____

16. $(2x + 3)(5x - 4)$ 16. _____

17. $(3t - 5)^2$ 17. _____

18. $(3a - 4b)(3a + 4b)$ 18. _____

19. $(5y - 2)(y^2 - 4y + 3)$ 19. _____

For problems 20 – 21, divide.

20. $\frac{12x^4 - 16x^3 + 8x}{4x}$ 20. _____

21. $\frac{3x^3 + 5x^2 - 5x + 8}{3x - 1}$ 21. _____

22. Write 2.14×10^{-4} in decimal notation. 22. _____

23. Write 1,457,000 in scientific notation. 23. _____

24. Simplify $\frac{4.2 \times 10^5}{8.4 \times 10^{-3}}$. Write the answer in scientific notation. 24. _____

25. Write a polynomial in descending powers of x that represents the area of the figure below. 25. _____

