

Chapter 4 Review

Name \_\_\_\_\_

Class Time \_\_\_\_\_

Simplify. Leave only positive exponents.

1.  $3x^0y^{-2}$

2.  $(-2y^3)^3$

3.  $(2x^5y^4)(6x^3y)$

4.  $(3x^2)(2x)^4$

5.  $(9xy^5)^0$

6.  $(4x^{-2})^3$

7.  $\frac{9x^2y^3}{6x^5y^3}$

8.  $\left(\frac{2y^{-2}}{x^{-1}}\right)^{-5}$

9.  $\frac{x^{-2}}{x^4}$

10. For the polynomial  $3x^4 - 2x + 9$
- classify as a monomial, a binomial, a trinomial, or none of these.
  - determine the degree of the polynomial
  - give the coefficient of the leading (first) term

Combine like terms.

11.  $6x^2 + 2x^4 - 2x^2 - x^4 - 4x^2$

12.  $5a + b + 4a - 3b$

Evaluate.

13.  $x^2 - 6x - 5$  for  $x = -4$ .

14.  $2xy^2 - y$  for  $x = 3$  and  $y = -1$

Add or Subtract.

15.  $(2x^3 + x^2 - 4) + (5x^2 + 1)$

16.  $(x^3 + 3xy - 5y^2) - (5x^3 + xy - 4y^2)$

17.  $(x + 2y - 5) + (3x - y) - (-4x + y - 2)$

Multiply.

18.  $-4x^4(2x^2 - 5x + 1)$

19.  $(x + 5)(x + 6)$

20.  $(3x - 2)(x - 4)$

21.  $(4x + y)^2$

22.  $(5x + 2)(5x - 2)$

23.  $(2x + 5)(3x - 4)$

24.  $(2x + 1)(4x^2 + 3x + 7)$

25.  $(x^2 - 5)(x^2 + 2)$

26.  $(4x - y)(2x + y)$

## Answers Chapter 4 Review

1.  $\frac{3}{y^2}$

2.  $-8y^9$

3.  $12x^8y^5$

4.  $48x^6$

5. 1

6.  $\frac{64}{x^6}$

7.  $\frac{3}{2x^3}$

8.  $\frac{y^{10}}{32x^5}$

9.  $\frac{1}{x^6}$

10a. trinomial

10b. 4

10c. 3

11.  $x^4$

12.  $9a - 2b$

13. 35

14. 7

15.  $2x^3 + 6x^2 - 3$

16.  $-4x^3 + 2xy - y^2$

16.  $-4x^3 + 2xy - y^2$

17.  $8x - 3$

18.  $-8x^6 + 20x^5 - 4x^4$

19.  $x^2 + 11x + 30$

20.  $3x^2 - 14x + 8$

21.  $16x^2 + 8xy + y^2$

22.  $25x^2 - 4$

23.  $6x^2 + 7x - 20$

24.  $8x^3 + 10x^2 + 17x + 7$

25.  $x^4 - 3x^2 - 10$

26.  $8x^2 + 2xy - y^2$