

**Chapter 13 Homework Packet 1****§13-1**

Determine whether each expression is a monomial. If it is not, explain why not.

1.  $6.7x^4$

2.  $\frac{4}{7}x^4y^2$

3.  $\frac{4y^3}{5x}$

4.  $-2x^{-4}$

Classify each expression as a monomial, a binomial, a trinomial, or not a polynomial. If it is a polynomial, give its degree.

5.  $3x^2$

6.  $5x^{0.5} + 2x$

7.  $-\frac{4}{5}x + \frac{2}{3}x^2$

8.  $5y^2 - 4y$

9.  $3f^4 + 6f^6 - f$

10.  $6 - \frac{4}{x}$

11.  $3 + 4x$

12.  $8$

13.  $5n^{15} - 9n + \left(\frac{1}{3}\right)$

14.  $r^8 - 5.5r^{75}$

15. Give some examples of words that start with *mono-*, *bi-*, *tri-*, and *poly-*, and relate the meaning of each to polynomials.

## §13-2

Identify the like terms in each polynomial.

16.  $x^2 - 8x + 3x^2 + 6x - 1$

17.  $2 - 9x + x^2 - 3 + x$

18.  $xy - 5x + y - x + 10y - 3y^2$

19.  $3a + 2b + a^2 - 5b + 7a$

20.  $10m - 3m^2 + 9m^2 - 3m - m^3$

21.  $2c^2 + d^3 + 3d^3 - 2c^2 + 6$

Simplify.

22.  $3n^2 - 4n + 12n^2 + 6n - 2$

23.  $4gh^2 + 2g^2h + 3g^2h - g^2h$

24.  $3(x^2 - 4x + 3) - 2x + 6$

25.  $8b^4 + 3b^2 + 2(b^2 - 8)$

26.  $7mn - 4m^3n^2 + 4(m^3n^2 + 2mn)$

27.  $4(x + 2y) + 3(2x - 3y)$