

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Chapter 5 Practice Test**

1) Identify each expression as one or more of a *monomial*, *binomial*, *trinomial*, *polynomial*:

- a)  $-23xyz$       b)  $m - 7 + m^2$       c)  $-xyba^3 + 1$       d)  $a + b + c - 1$

2) Find the degree of the following expressions:

- a)  $-6$       b)  $-27xy^4z$       c)  $x^3y^2 - 17xyz + 25xyz^2$       d)  $abcdef - 4a^6 - 3p$

3) Find the degree of  $x$  for each:

- a)  $-w^3x^2y$       b)  $3 - x + 2x^3yz^4 - x^2y$

4) Write the following polynomial in descending powers of  $x$ :

$$3x^2 - 1 + x^5 - 4x^3 + x$$

5) Simplify:

- a)  $(x^2 - 6x + 7) + (3x^2 - 5x + 1)$       b)  $(-2y^2 + 5 - y) + (-3y + 5y^2 - 1)$

- c)  $(3a^2 - 6a - 2) - (4a^2 - 2a - 2)$       d)  $(-3x + 4x^2) - (1 + x^2 - 4x)$

6) Simplify:

a)  $-4x(5x^3)$       b)  $-y^2z(2z)$       c)  $3xyz^2(2xy)(-4x^2z^2)$       d)  $6abc(a^2)(-b)$

7) Expand:

a)  $4(y^2 - 4y)$       b)  $-3x(2x^2 - 5x + 2)$

8) Expand and Simplify:

a)  $-3(2x^2 - 3x + 4) - x(4x - 6)$       b)  $4m(3m - 3 + 2m^2) + m(m^2 - 2 - 12m)$

9) Simplify:

a)  $(p^4)^3$       b)  $(ab^3)^2$       c)  $(-3xy^2z^4)^2$       d)  $-(2a^2b^3)^2$

10) Simplify:

a)  $(2y)^3(4y^2)^5$       b)  $(-xyz)(2x^2y)^4$       c)  $(-abc)^2(abc^2)^3$       d)  $\left(\frac{3x^3}{2xy^2}\right)^3$

11) Simplify:

a)  $\frac{16m^5}{-8m}$

b)  $\frac{24a^4b^6c^2}{6a^3bc}$

c)  $\frac{-3x^5y}{-x^5}$

12) Simplify:

a)  $\frac{18a^{-2}bc^4}{-3a^{-2}b^4c}$

b)  $\frac{-48x^{-7}y^3}{-4x^{-3}y^2}$

13) Simplify:

a)  $\frac{8x^4-2x^3+4x^2}{2x^2}$

b)  $\frac{-12a^3b^4+9a^2b-3a^6b^2}{-3ab}$

c)  $\frac{30xyz+50x^3y^4}{-10xy}$