Name: _____   Date: _____

Practice: Communicate With Algebra

1. For each term, identify the coefficient and the variable.

a) $4x$

b) $-5p^4$

c) $3m^2n$

d) g^3h^2

e) $-2y^5$

f) $-p^4q^5$

g) $\frac{3}{4}ab$

h) $0.6r^4s^2$

2. The expression $2x + 5$ is a:

A monomial   **B** binomial

C trinomial   **D** term

3. The expression $-12m^4n$ is a:

A monomial   **B** binomial

C trinomial   **D** term

4. The expression $3a^2b^2 + ab^3 + b$ is a:

A monomial   **B** binomial

C trinomial   **D** term

5. Classify each polynomial by type.

a) $2x + 1$

b) $3p^2 - p + 4$

c) $4b^2d^3$

d) $6 + gh^5$

e) $2 - y^5 - y^2 + 4y$

f) $x^2 - y^2 + 4$

g) $ab - b$

h) $6p^3q^3$

6. What is the degree of each term in question 5?

7. The degree of $5m^2n + mn^3 + 1$ is:

A 1   **B** 2

C 3   **D** 4

8. What is the degree of each polynomial?

a) $6a^2 + 4b^3$ **b)** $5b^4$

c) $3x^2 + x - 1$ **d)** $m^3 - m^2 + 4m$

e) $2p^4q^3$ **f)** $x^2y^2 + 4xy$

g) $a^5b - 7b^3$

h) $-m^4n^3 - m^2n + 4mn^4$

9. Which algebraic expression matches this phrase: a number increased by 6 is 8

A $6x = 8$

B $x + 8 = 6$

C $x + 6 = 8$

D $\frac{x}{6} = 8$

10. Write an equation for each phrase.

a) double a number is 14

b) a number decreased by 6 is 5

c) one third of a number is 2

d) triple a number, increased by 1 is 8

11. Maggie earns $5 per hour when she babysits 1 child. She earns $8 per hour when she babysits 4 children.

Let x represent the number of hours she babysits 1 child and y represent the number of hours she babysits 4 children.

Which expression represents her total earnings?

A $5x - 8y$ **B** $x + y$

C $5x + 8y$ **D** $x - y$

12. Evaluate each expression for the given values of the variables.

a) $2x - 3$ $x = 4$

b) $3y + 2$ $y = 7$

c) $r^2 - r + 1$ $r = 6$

d) $a^2 - 2b^2$ $a = 3, b = 1$

e) $p^2 + 2p - 3$ $p = 4$

f) $4x^2 - y - 2$ $x = 2, y = 1$