Pre-Algebra
Chapter 2 Practice Test

1.) (1 pt each) Properties of Numbers (2-1) Write the name of the property shown.

a) $3(a + b) = 3a + 3b$

b) $2 \times 1 = 2$

c) $3 + 13 + 7 = 3 + 7 + 13$

d) $(17 \times 5) \times 20 = 17 \times (5 \times 20)$

2.) (4 pts each) Distributive Property (2-2) Simplify each expression.

a) $7(5a + 3)$

b) $(4 + x)(6)$

c) $-(3y + 2)$

d) $-8(11a - 9)$

3.) (4 pts each) Simplifying Variable Expressions (2-3) Simplify each expression.

a) $15a + 8b - 9a + 3b$

b) $8c + 7(2c - 3)$

c) $3(4 + x) - 8(2x + 4)$

d) $9y - 2(3y - 5) + 7$

4.) (4 pts each) Solving Equations by Adding or Subtracting (2-5) Solve each equation.

a) $b + 8 = 21$

b) $-14 + x = 18$

c) $a - 11 = 54$

d) $38 = y - 13$

5.) (4 pts each) Solving Equations by Multiplying or Dividing (2-6) Solve each equation.

a) $6a = 72$

b) $\frac{y}{8} = 5$

c) $-15t = 45$

d) $\frac{w}{-9} = 12$

6.) (2 pts each) Inequalities and Their Graphs (2-8) Graph the solutions to each inequality on a number line.

a) $6 > y$

b) $q \leq 12$

c) $b > -3$

d) $-5 \leq h$

7.) (4 pts each) Solving One-Step Inequalities by Adding or Subtracting (2-9) Solve each inequality. Graph the solutions.

a) $7 + a < 9$

b) $29 \leq x + 12$

c) $-30 > b - 9$

8.) (4 pts each) Solving One-Step Inequalities by Multiplying or Dividing (2-10) Solve each inequality. Graph the solutions.

a) $9x \leq 36$

b) $16 < \frac{y}{5}$

c) $48 \geq -8b$