GroupWork- Section 1.7&1.8

Group Members_____

1. Evaluate the following:

   (a) $-4^2 = -16$

   (b) $(-4)^2 = 16$

2. Simplify the following:

   a.) $\frac{-9(-3)}{-6} = -\frac{9}{2}$

   b.) $\frac{12}{9-12} = -4$

   c.) $\frac{-6^2}{2} = -18$

   d.) $\frac{(-6)^2}{2} = 18$

   e.) $(-6)^2 + 6 = 42$

   f.) $\frac{8-3(-2)}{3} = \frac{14}{3}$

   g.) $\frac{-2-4^2}{3(-6)} = 1$

   h.) $\frac{|3-9|+3}{3} = 2$

   i.) $\frac{-4-8(-2)}{-9-2(-3)} = -4$

   j.) $\frac{|-3+6|+|-2+7|}{|-2\cdot 2|} = 2$

   k.) $\frac{-3-4}{-1} = 7$

   l.) $\frac{-1}{1-2} = 1$

   m.) $\frac{-4+5}{-4\cdot 4} = -\frac{1}{16}$

   n.) $\frac{(-6)^2}{-6^2} = -1$

3. Decide whether each statement is true or false..

   (a) The product of three negative integers is negative. True

   (b) The product of three positive integers is positive. True

   (c) The product of four negative integers is negative. False

4. Use the distributive property (i.e. $a(b+c) = ab + ac$) to write each expression without parentheses.

   (a) $9(x-6) = 9x - 54$

   (b) $7(4x-3) = 28x - 21$

   (c) $5(x+4m+2) = 5x + 20m + 10$

   (d) $-11(5x+3) + 10 = -55x - 33 + 10 = -5x - 23$

   (e) $-\frac{1}{5}(10a - 25b) = -2a + 5b$

   (f) $-(2+x)$ $-2-x$

   (g) $-(x^2+1)$ $-x^2-1$

5. Find the reciprocal of the following:

   (a) 5 $\frac{1}{5}$

   (b) $\frac{1}{4}$ 4

   (c) 45 1/45

   (d) $\frac{3}{4}$ 4/3

   (e) $\frac{5}{6}$ 6/5

6. Define the following:

   (a) $\mathbb{N}$ Natural numbers

   (b) $\mathbb{R}$ real numbers

   (c) $\mathbb{Q}$ rational numbers