NAME _____ HW # 5

1) True/False: If a is a real number, then $-a$ is always a negative number. Justify your response with an example.

If "a" is negative, $-a$ is positive.

Ex: $a=-3$ $\quad -a=-(-3)=3$

2) Adam is scuba diving. He descends 5 feet below sea level. He descends the same distance 4 more times. What is Adam's final elevation? Use an integer expression to represent this situation.

$-5+4(-5)$ OR $-5+-5+-5+-5+-5$

$-5+-20$

-25 ft $\quad -25$ ft

3) The product of three integers is -3. Determine all the possible values of the three factors. $(1)(-1)(3)$ $\quad (-3)(1)(1)$ $\quad (-3)(-1)(-1)$

4) Evaluate the following:

a. $4(-3)$ $\quad -12$

b. $-12(-3)$ $\quad 36$

c. $5(-2)(-7)$ $\quad 70$

d. $-33 \div 11$ $\quad -3$

e. $\frac{-56}{14}$ $\quad -4$

f. $\frac{18}{0}$ $\quad$ UNDEFINED

5) Evaluate the following:

a. $(-4)^2$ $\quad -4 \cdot -4$ $\quad 16$

b. -3^2 (the "opposite" of 3^2) $\quad -9$

c. $(-1)^3$ $\quad -1 \cdot -1 \cdot -1$ $\quad -1$

6) Describe and correct the error in each question:

a. $(-2)(-7) = -14$

$(-2)(-7)$ is not -14

$(-2)(-7) = 14$

b. $-10^2 = 100$

-10^2 is the opposite of 10^2

$-10^2 = -100$

c. $0 \div -5 = -5$

$0 \div -5$ is not -5

$0 \div -5 = 0$

7) Find the next three numbers in the pattern: $7, -28, 112, -448$ (x-4, x-4)

1792, -7168, 28672

8) Find the average of the integers: $3, -10, -2, 13, 11$

$3+(-10)+(-2)+13+11 = \frac{15}{5} = 3$