Unit 3 Module C Notes Sections 10.3 – 10.8

View the PowerPoint, Videos, or Textbook for Module 3C.

Vocabulary *Fill in the blanks.*

1. (Section 10.3) The _____ _____ of 0 says that for any real number a, $a+0=0+a=a$

2. (Section 10.4) For any real numbers a and b _____ $= a + (- b)$

3. (Section 10.5) . Answer positive or negative

   a. If we multiply two negative numbers, the product will be _____

   b. If we multiply one positive number by one negative number, the product will be _____

4. (Section 10.6) Two numbers whose product is 1 are called _____, or

   _____ _____, of each other.

5. (Section 10.7) Terms such as $5x$ and $-4x$ whose variable factors are exactly the same, are called _____ _____.

6. (Section 10.8) When using the order of operations to simplify an expression, first do any

   operations in _____, then _____ operations, then

   multiply or divide operations from _____ to _____, and finally

   _____ or _____ from left to right

Problems *Show ALL steps.*

1. (Sections 10.3 and 10.4) Add or subtract:
   a. $-8.6+2.9$ b. $(-42)+81+(-26)+18+(-31)$ c. $-10.2-(-6.5)$

2. (Sections 10.3 and 10.4) If the temperature is now 28.5° F and it drops 36° F by tomorrow morning, what is the temperature tomorrow morning? _____

3. (Sections 10.5 and 10.6) Multiply or divide:

   a. $\dfrac{96}{-6}$

   b. $(-2)(-5)(-7)$

   c. $7(-9)\times 0\times 5$

   .

4. (Section 10.6) During a chemical reaction, the temperature of a solution in a beaker decreased every minute by the same number of degrees. The temperature was at 71° F at 2:12 P.M. By 2:37 P.M., the temperature had dropped to –4° F. By how many degrees did it change each minute?

5. (Section 10.7) Factor the greatest common factor out of each term using the distributive law:
   $12xy - 15xz + 30x$

6. (Section 10.8) Simplify:

   a. $\dfrac{(15-5)-6^2}{9^2 + 3^2}$
   express your answer as
   an integer or simplified fraction

   b. $\left[9(x+5)-7\right]+\left[4(x-12)+9\right]$