Unit 4 Module B Notes Sections 12.4 – 12.7

View the PowerPoint, Videos, or Textbook for Module 4B.

<u>Key Terms</u>   *Fill in the blanks.*

1. (Section 12.4)   When we replace the variables in an expression with numbers and calculate the

result, we are _____ the expression.

2. (Section 12.5) _____ translates to "$\cdot$" or "$\times$"

3. (Section 12.6) Problem solving in algebra:

   a.   To _____ yourself with a problem, read it carefully, choose a variable
        to represent the unknown, and make a drawing.

   b.   To _____ a problem into mathematical language, write an equation

   c.   To _____ an equation, find all replacements that make the equation true.

   d.   Always _____ the answer in the original problem.

   e.   As a final problem-solving step _____ the answer to the problem clearly.

4. (Section 12.7)   The solution set $\{x | x > 2\}$ is written using _____ notation.

5. (Section 12.7)   Whenever both sides of an inequality are multiplied or divided by a _____
number, the direction of the inequality must be reversed to form an equivalent inequality. (The
Multiplication Principle for Inequalities)

<u>Problems</u> *Show ALL steps.*

1. (Section 12.4) Solve for c: $A = \dfrac{a+b+c+d}{4}$

2. (Section 12.5)   Translate to an equation. Do not solve. Change % to decimals

Let x be the unknown.

a. 13% of 80 is what number?   a. _____

b. What number is 60% of 70.   b. _____

c. 43 is 20% of what number?   c. _____

d. 110% of what number is 30?   d. _____
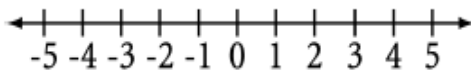
e. 16 is what percent of 80?   e. _____

f. What percent of 94 is 10.5?   f. _____

3. (Section 12.6) If x is the first of three odd consecutive integers, express the sum of three odd integers in terms of x. Simplify if possible

4. (Section 12.6)   The price of a suit was decreased to a sale price of $526.40. This was a 20% reduction. What was the former price?

5. (Section 12.7) Solve $2(x-3)-5 \leq 3(x+2)-18.$ Graph the solution set and write it in set-builder notation.

Graph:
-5 -4 -3 -2 -1 0 1 2 3 4 5

Set-Builder notation: _____