

## MATH 125 CBE STUDY GUIDE

The Math 125 textbook, Mathematics for the Health Sciences: Custom edition for Goodwin College, Pearson, 2015 is available in the library for use in the library. There are also copies of the textbook for sale in the book store that you are welcome to purchase to assist with your studying.

You should know how to do the homework problems that are listed in the syllabus. The textbook does not provide answers to the homework. You may check your answers by meeting with a Professional Tutor in the Math Lab located in Room 219 on the River Campus. The Math Lab is open Monday – Friday 8:30 a.m. to 9:00 p.m. and Saturday 8:30 a.m. – 2:00 p.m.

A copy of the **Measurement Fact Sheet is provided** at the end of this document. You will need to know how to use the formula sheet and you will be given a copy for the exam. Any formula or conversion (other than the BSA formula) that is not included on the **Measurement Fact Sheet** should be memorized.

### Key Reminders:

You must show your work

You will need to demonstrate your ability to use **dimensional analysis**

For Application problems (word problems), you must put your final answer in **sentence form**

### Some of the types of problems you may expect to see:

- Simplifying expressions
- Solving equations for a given variable
- Graphing and locating Coordinates on graph
- Creating a table of values
- Finding intercepts
- Graphing linear equations
- Problems involving Dimensional Analysis
  - Changing from one household measure to another such as inches to feet
  - Changing from household measure to metric or metric to household such as inches to centimeters
- Scientific Notation
- Using percents
- Precision and Accuracy
- Problems where you may use decimal point method to convert within the metric system such as grams to micrograms
- Application problems involving
  - Oral dosages
  - Parenteral dosages
  - Dosages based on weight
  - Safe Range dosages

- Determining the amount of solute in a solution or the amount of solution that contains a specified amount of solution
  - Diluting a solution
  - Flow rate in mL/hr or gtt/min
- Reading label and stating strength of the medication
- Drawing an arrow to mark the correct dosage on a syringes
- Calculating the BSA of a Client

# Measurement Fact Sheet

## Linear Equivalents

1 mile = 5280 feet

1 km = 0.62 miles

1 yard = 3 feet

1 yard = 36 inches

1 foot = 12 inches

1 inch = 2.54 cm

## Mass Equivalents

1 kg = 2.2 lb

1 kg = 1000 g

1 g = 1000 mg

1 lb = 16 oz

1 oz = 28 g

1 mg = 1000 mcg

## Liquid Equivalents

1 gal = 4 qt

1 qt = 2 pints

1 pint = 2 cups

1 cup = 8 oz

1 tbsp (T) = 15 mL

1 tsp (t) = 5 mL

1 tbsp = 3 tsp

1 oz = 2 tbsp

1 oz = 30 mL

1 mL = 15 gtt

## Time Equivalents

1 week = 7 days

1 day = 24 hours

1 hour = 60 min

1 min = 60 sec

## BSA Formulas:

$$\text{BSA (metric)} = \sqrt{\frac{\text{weight in kg} \times \text{height in cm}}{3600}}$$

$$\text{BSA (household)} = \sqrt{\frac{\text{weight in lb} \times \text{height in in}}{3131}}$$