Homework Check: FCM 12 p. 338 #1 – 3, p. 339 # 1 – 3, p. 340 # 1 , 3

Note: Using Formulas to Solve Problems

A formula is a mathematical equation that relates two or more measures as variables that represent real world quantities. It is often necessary to rearrange formulas in order to isolate a certain variable when solving. We do this using the same rules and procedures that we use in equation solving. For example, given the following formula, rearrange for the variable indicated.

\[ C = \frac{A_g}{g+12} \] rearrange for \( A \)

\[ C(g+12) = A_g \]

\[ \frac{C(g+12)}{g} = A \]

This particular formula represents Young’s formula and is used to calculate a child’s dosage of medicine in \( C \) milligrams, when an adults dose \( A \) milligrams and the child’s age \( g \) in years is known. Suppose the adult dose is 600 mg, determine the child’s dosage if the child is 3 years old. In this case, we would substitute the numbers that we know in to the appropriate place in the formula. For example,

\[ C = \frac{A_g}{g+12} \]

\[ A = 600, g = 3 \]

\[ C = \frac{600(3)}{3+12} \]

\[ C = \frac{1800}{15} \]

\[ C = 120 \text{mg} \]

Note that it is always important to identify the information that you are given and the information that you are looking for in order to assure that you answer the question asked.

Homework: FCM 12 p. 346 # 6 – 11, 14