Dosage Calculations VII – IV Rates (BSN)

VANCOUVER COMMUNITY COLLEGE

IV Formulas:

Drip Rate:

IV gtts/min = total mLs infused x gtts factor   ** gtts in units of gtts/ml
                          time in minutes

Flow Rate:

IV mL/hr = total IV fluid (mLs)
                    time (mins or hrs)

Questions:

***Not all information provided is needed for each question; only choose the information necessary to answer each question. ***

1) A doctor orders 2 mg/kg of a drug ABC to a patient who weighs 60 kg. The drug is to be placed in a 100 cc NS bag before being administered over an hour.
   a. What is the flow rate (mL/min)?
   b. How many mL will be administered in 15 mins?

2) A patient is to receive 200 mg of drug Z over 30 mins Q12H. The drug is available as a 0.5 gram tablet which must be reconstituted in 50 cc before administration in a 1 L bag using a15 gtts tubing.
   a. How many mg of the drug did the patient receive in 30 mins?
   b. How many mL of the reconstituted drug do you draw?

3) A patient is being administered 1 L of an IV drug over 12 hours. The drug is being administered with a 30 gtts tubing.
   a. What is the drip rate (gtts/min)?
   b. How much has been infused into the patient in the first 3 hours?

4) An order of 50 mg drug Y is given to a patient in the ER every 4 hour. The drug comes pre-made in a NS bag as a 50 mg/500 mL solution. The Parenteral Drug Therapy Manual (PDTM) recommends diluting this to 25 mg/500 mL solution before administration.
   a. What is the flow rate (mL/hr)?
   b. What is the drip rate (gtts/min) when using a 15 gtts tubing?

SOLUTIONS: 1a) 1.67 mL/min **b)** 25 mL **2a)** 200 mg **b)** 20 cc **3a)** 42 gtts/min **b)** 250 mL **4a)** 250 mL/hr **b)** 63 gtts/min