Note Title 1/25/2007

Calculating Flow Rates

Ex. The order is for 500 mL .9% NS in 2 hr IV. The tubing is calibrated at 10 drops per mL. How many drops per minute do you administer?

$$\frac{mL}{hr} \longrightarrow \frac{drops}{min}$$

$$\frac{500\ mL}{2\ hr} \quad \frac{10\ gtt}{1\ mL} \quad \frac{60\ min}{1\ hr}$$

$$\frac{500\ mL}{2\ \cancel{hr}} \times \frac{1\ \cancel{hr}}{60\ min} = 4.1\overline{6}\ \frac{mL}{min}$$

$$4.1\overline{6}\ \frac{\cancel{mL}}{min} \times \frac{10\ gtt}{1\ \cancel{mL}} = 41.\overline{6}\ \frac{gtt}{min}$$

(Ex.) The order is 400 mL of 5% D/W in 4 hrs, the flow rate was set at 16 drops per minute. You come back 2 hrs later and the patient has received 192 mL with 208 mL remaining. Recalculate the flow rate with a drop factor of 10 drops per mL.

$$\frac{208\ mL}{2\ hr} \longrightarrow \frac{gtt}{min}$$

$$\frac{208\ mL}{2\ hr} \quad \frac{10\ gtt}{1\ mL} \quad \frac{60\ min}{1\ hr}$$

$$\frac{208\ mL}{2\ \cancel{hr}} \times \frac{1\ \cancel{hr}}{60\ min} = 1.7\overline{3}\ \frac{mL}{min}$$

$$1.7\overline{3}\ \frac{\cancel{mL}}{min} \times \frac{10\ gtt}{1\ \cancel{mL}} = \boxed{17.\overline{3}\ \frac{gtt}{min}}$$