

$$\text{flow rate} = (\text{drops} / \text{min})$$

- 1) 100 mL/hr ← order
drop factor is : 10 gtt/mL
how many drops per minute (gtt/min)

$$\frac{\text{volume (mL)}}{\text{time (min)}} \times \text{drop factor (gtt/mL)}$$
$$\frac{100(\text{mL})}{60(\text{min})} \times 10 (\text{gtt/mL}) = 16.6\bar{6} \text{ gtt/min}$$
$$\uparrow$$
$$\boxed{17 \text{ gtt/min}}$$

- 2) at what rate would you set your pump?

$$\frac{150 \text{ mL}}{0.5 \text{ hours}} = \boxed{300 \text{ mL/hr}}$$

- 3) 20 mg IM every 4 hours as needed for nausea
avail) 10 mL vial labeled 25 mg/mL. How many mL will you
draw up to give?

$$\frac{20 \text{ mg (1 mL)}}{25 \text{ mg}} = \boxed{0.8 \text{ mL}}$$

- 4) 3mg IM every 6 hours as needed
avail) 1 mL vial labeled 5mg/mL. How many mL per dose?

$$\frac{3 \text{ mg (1 mL)}}{5 \text{ mg}} = \boxed{0.6 \text{ mL}}$$

5) 5000 units every 12 hours
avail) 10,000 units / 2 mL.
- how many mL will you admin for 1 day?

$$5000 \text{ units} \times 2 = 10,000 \text{ units}$$

$$\text{so } \boxed{2 \text{ mL}}$$

6) 200 mg every 8 hours IM
avail) vial 8 mL contains 300 mg per 2 mL
- how many mL would you give every 8 hours? (per 1 dose)

$$\frac{200 \text{ mg} (2 \text{ mL})}{300 \text{ mg}} = 1.\overline{33} \quad \boxed{1.3 \text{ mL}}$$

7) 80 mg IVPB over 30 min
avail) 80 mg in 50 mL of D5W. flow rate in mL/hr?

$$\frac{50 \text{ mL}}{0.5 \text{ hr}} = y = \boxed{100 \text{ mL/hr}}$$

8) you have an IV infusing @ 125 mL/hr. How long will it take 1500 mL to infuse?

$$\frac{125 \text{ mL}}{1 \text{ hour}} = \frac{1500 \text{ mL}}{x}$$
$$\frac{1500}{125} = \frac{125x}{125}$$
$$x = \boxed{12 \text{ hours}}$$

9) 1g IV every 12 hours over 30 min
avail) 1g in 150 mL NS.
- at what rate would you set your pump?

150 mL = volume
30 min = time

$$\text{so } \frac{150 \text{ mL}}{0.5 \text{ hr}} = \boxed{300 \text{ mL/hr}}$$

10) 75 mL/hr to a patient
- how many hours will it take for the patient to receive 600 mL?

$$\frac{75 \text{ mL}}{1 \text{ hour}} = \frac{600 \text{ mL}}{x \text{ hours}} \rightarrow \frac{600}{75} = \frac{75x}{75}$$
$$x = \boxed{8 \text{ hours}}$$

11) 100 mg
avail) 20 mg/mL
- how many mL should be admin?

$$\frac{100 \text{ mg (1 mL)}}{20 \text{ mg}} = \boxed{5 \text{ mL}}$$

12) 50 mg/kg/day
patient weighs 85.8 pounds
- patient will receive _____ mg/day

$$\frac{85.8 \text{ pounds}}{2.2} = 39 \text{ kg} \quad \left| \quad \frac{50 \text{ mg}}{1 \text{ kg}} = \frac{x \text{ mg}}{39 \text{ kg}} \rightarrow x = \boxed{1950 \text{ mg}}$$

13) 2.5 mL every 8 hours
 avail) 250 mg / 5 mL
 - how many mg for the day?

$$\frac{24}{8} = 3 \text{ so tid}$$

$$2.5 \times 3 = 7.5 \text{ mL}$$

$$\frac{7.5 \text{ mL} (250 \text{ mg})}{5 \text{ mL}} = \boxed{375 \text{ mg}}$$

14) 2 mg - 4 mg / kg / every 4 hours oral as needed for pain
 66 lbs → kg
 2.2 = 30 kg
 ? → what is min amount of med in grams that can be admin every 4 hours? (per dose)

$$\frac{2 \text{ mg}}{1 \text{ kg}} = \frac{x \text{ mg}}{30 \text{ kg}}$$

$$60 = x \text{ so } 60 \text{ mg} \rightarrow \text{g}$$

$$\frac{60}{1000} = \boxed{0.06 \text{ grams}}$$

15) 5 mL of ns is added to a vial of Lasix 20 mg / 5 mL.
 - how many mg of Lasix are in each millimeter of fluid?

$$5 \text{ mL} + 5 \text{ mL} = 10 \text{ mL}$$

$$\frac{20 \text{ mg}}{10 \text{ mL}} = \boxed{2 \text{ mg in 1 mL}}$$