

HENKE BOOK

Pgs 291, 292, 293

CASE STUDIES Chiquita Baker

$$1. X \text{ mcg/mL} = \frac{30 \text{ mg}}{500 \text{ mL}} \cdot \frac{1000 \text{ mcg}}{1 \text{ mg}} = \frac{30,000}{500} = 60 \text{ mcg/mL}$$

$$2. \text{ mL/hr} = \frac{500 \text{ mL}}{30 \text{ mg}} \cdot \frac{100 \text{ mcg}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{1 \text{ mg}}{1000 \text{ mcg}} = \frac{3000000}{30000} = 100 \frac{\text{mL}}{\text{hr}}$$

$$3. X \text{ mcg/mL} = \frac{4 \text{ mg}}{500 \text{ mL}} \cdot \frac{1000 \text{ mcg}}{1 \text{ mg}} \cdot \frac{4000}{500} = 8 \text{ mcg/mL}$$

$$4. \text{ mL/hr} = \frac{500 \text{ mL}}{4 \text{ mg}} \cdot \frac{0.5 \text{ mcg}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}} \cdot \frac{1 \text{ mg}}{1000 \text{ mcg}} = \frac{15000}{4000} = 4 \text{ mL/hr}$$

$$5. 12 \text{ units} \cdot 90 \text{ Kg} = 1080 \text{ units/hr}$$

$$6. X \text{ mL/hr} = \frac{12 \text{ units}}{\text{Kg/hr}} \cdot 90 \text{ Kg} \cdot \frac{500 \text{ mL}}{25000 \text{ units}} = \frac{540,000}{25000} = 22 \text{ mL/hr}$$

$$7. X \text{ mg} = \frac{100 \text{ mL}}{1} \cdot \frac{10 \text{ mg}}{1 \text{ mL}} = \frac{1000}{1} = 1000 \text{ mg}$$

$$8. X \text{ mL/hr} = \frac{1 \text{ mL}}{10 \text{ mg}} \cdot \frac{5 \text{ mcg}}{\text{Kg/min}} \cdot \frac{1 \text{ mg}}{1000 \text{ mcg}} \cdot \frac{90 \text{ Kg}}{1} \cdot \frac{60 \text{ min}}{1 \text{ hr}} = \frac{27000}{10,000} = 3 \text{ mL/hr}$$

$$X \text{ mL/hr} = \frac{1 \text{ mL}}{10 \text{ mg}} \cdot \frac{50 \text{ mcg}}{\text{Kg/min}} \cdot \frac{1 \text{ mg}}{1000 \text{ mcg}} \cdot \frac{90 \text{ Kg}}{1} \cdot \frac{60 \text{ min}}{1 \text{ hr}} = \frac{270000}{10,000} = 27 \text{ mL/hr}$$

CASE Studies

1. dosages may need to be adjusted due to the client's renal failure and being on dialysis
2. The vasopressors have different actions but both work to raise the client's blood pressure and only taking one isn't helping.
3. The client is taking propofol because it will help relax them while they are intubated
4. Calcium channel blockers could help with atrial fibrillation, but this client has an allergy to calcium channel blockers so use of these are contraindicated in the client
5. The vasopressors can be increasing the client's heart rate
6. IV push drug are given slowly to prevent side effects like nausea, since this client is on protonix which can cause nausea.