Roxanne Balag Basic IV Problems Page 244

1. a. $= \frac{1000 \text{ mL}}{150 \text{ mL}}$ = 6.7 hrs

b. macrodrip:

b. $\frac{10 \text{ gtt}}{1 \text{ mL}} * \frac{150 \text{ mL}}{1 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{150}{6} =$ 25 gtt/min

microdrip:

$\frac{60 \text{ gtt}}{1 \text{ mL}} * \frac{150 \text{ mL}}{1 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{9000}{60} =$ 150 gtt/min

c. 25 gtt/min

2. macrodrip:

a. $= \frac{10 \text{ gtt}}{1 \text{ mL}} * \frac{100 \text{ mL}}{6 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{1000}{360} = 2.7$ 3 gtt/min

microdrip

$\frac{60 \text{ gtt}}{1 \text{ mL}} * \frac{100 \text{ mL}}{6 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{100}{6} = 16.6$ 17 gtt/m

b. microdrip = 17 gtt/min

3. a. Set the pump to be infused at 150 mL. Allow 100 mL to run of
Leaving 150 mL NS.

B. macrodrip=

$\frac{15 \text{ gtt}}{1 \text{ mL}} * \frac{150 \text{ mL}}{3 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{150}{12} =$ 13 gtt/min

microdrip

$\frac{60 \text{ gtt}}{1 \text{ mL}} * \frac{150 \text{ mL}}{3 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{150}{3} =$ 50 gtt/mi

c. microdrip @ 50 gtt/min

4. $\frac{500}{24} = 20.8 =$ 21 mL/hr

5. a. $\frac{250 \text{ mL}}{60 \text{ min}} * \frac{10 \text{ gtt}}{1 \text{ mL}} = \frac{2500}{60} = 41.66 =$ 47 gtt/min

b. $\frac{10 \text{ gtt}}{1 \text{ mL}} * \frac{250 \text{ mL}}{1 \text{ hr}} * \frac{1 \text{ hr}}{60 \text{ min}} = \frac{250}{6} = 41.6$ or 42 gtt/min

6.
a. $\frac{10\ mL}{1\ g} * \frac{500\ mg}{1} * \frac{1\ g}{1000\ mg} = \frac{10}{2}$ = 5 mL add 5mL to make 500 mg in 250 mL D5W

b. $\frac{250\ mL}{8\ hr} = 31.2$ or 31 mL/hr =

7. Step 1 125 × 20 = 2500 mL Step 2 75 × 4 = 300 mL Step 3 + 300mL 2500mL = 2800 mL

8. 9. 90 mL/hr

b. 1000 ÷ 90 = 11.11 or 11.1 hr

9. $\frac{x\ mg}{hr} = \frac{0.15g}{500\ mL} * \frac{50\ mL}{1\ h} * \frac{1000\ mg}{1\ g} = \frac{25000}{500} =$ 50 mg

10. a. Type of IV fluid: D5W
amount of IV fluid: 75 mL hr
time for infusion: 60 min
b. secondary vol: 75 mL
secondary rate: $\frac{75\ mL}{90\ min} * \frac{60\ min}{1\ hr} = \frac{4500}{90} =$ 50 mL/hr

11. $\frac{3}{4} * 150mL = 112.5$ kcal
Step 2: 150 mL − 112.5 mL = 250 mL H_2O

12. Step 1: $\frac{1}{2} * \frac{500mL}{1} =$ 250 mL
Step 2: 500 mL − 250 mL = 250 mL H_2O

13. Step 1: $\frac{1}{4} * \frac{400mL}{1} =$ 100 mL
Step 2: 400 mL − 100 mL = 300 mL H_2O

14. no water since it is a full strength 1 kcal.

Roxanne Balag Page 269 - Self Test 1

1. $\frac{b.1\,hr}{800u} * \frac{25{,}000u}{1} = 31.25$ **31.3 hr**

a. $\frac{250\,mL}{25{,}000u} * \frac{800u}{1\,hr} = \frac{200{,}900}{25{,}000} =$ **8 mL/hr**

2 100 mL/hr

3.

$\frac{1000\,mL}{24g} * \frac{24g}{24h} = \frac{24{,}000}{376} =$ **46.7 mL/hr**

4 $\frac{100\,mL}{125\,mg} * \frac{10\,mg}{hr} = \frac{1{,}000}{125} =$ **8 m/hr**

5. $\frac{100mL}{100mg} * \frac{4mg}{1hr} = \frac{400}{100}$ **4 mL/hr**

6. a) $\frac{250\,mL}{125u} * \frac{15u}{1hr} = \frac{3750}{125} =$ **30 ml/hr**

b. $\frac{1\,hr}{15u} \times \frac{125u}{1} = \frac{125}{15} =$ **8.3 hr**

8. a $\frac{500mL}{25{,}000u} * \frac{1260u}{1hr} = \frac{600{,}000}{25{,}000} =$ **24 mL/hr**

b. $\frac{1hr}{1260u} * \frac{25{,}000u}{1} = \frac{25000}{1200} =$ **20.8 hr**

9. a. $\frac{250\ mL}{250\ u} * \frac{23\ u}{1\ hr} = \frac{5750}{250} =$ **23 mL/hr**

b. $\frac{1\ hr}{23\ u} * \frac{250\ u}{1} = \frac{250}{23} =$ **10.7 hr**

10. $\frac{250\ mL}{750{,}000\ u} * \frac{100{,}000\ u}{1\ hr} = \frac{25{,}000{,}000}{}$

= 33.3 mL/hr