Calculation of Oral Meds: Solid & Liquids

Chapter 4 Test 1 Proficiency

1. $\frac{15\text{mL}}{30\text{ MEQ}} \times 20\text{ MEQ} = \frac{300}{30} = 10\text{ mL}$

2. $\frac{7.5\text{mL}}{75\text{mg}} \times 150\text{mg} = \frac{1,125}{75} = 15\text{ mL}$

3. $\frac{10\text{mL}}{0.25\text{mg}} \times 0.125\text{mg} = \frac{1.25}{0.25} = 5\text{ mL}$

4. $\frac{5\text{mL}}{125\text{mg}} \times 375\text{mg} = \frac{1875}{125} = 15\text{mL}$

5. $\frac{2.5\text{mL}}{20\text{mg}} \times 40\text{mg} = \frac{100}{20} = 5\text{ mL}$

6. $\frac{1\text{ tab}}{0.25\text{mg}} \times 0.5\text{mg} = 2\text{ Tablets}$

7. $\frac{1\text{ Cap}}{0.1\text{mg}} \times \frac{1\text{mg}}{1000\text{mcg}} \times 100\text{mcg} = \frac{100}{100} = 1\text{ Cap}$

8. $\frac{1\text{ Tab}}{100\text{ mg}} \times 250\text{ mg} = \frac{250}{100} = 2.5\text{ Tab}$

$2\frac{1}{2}$

9. $\frac{1\text{ Cap}}{250\text{ mg}} \quad \frac{1000\text{ mg}}{1\text{ g}} \times 0.5\text{ g} = \frac{500}{250} = 2\text{ CAP}$

10. $\frac{1\text{ Tab}}{300\text{ mcg}} \times \frac{1000\text{ mcg}}{1\text{ mg}} \times 0.3\text{ mg} = \frac{300}{300} = \frac{1}{\text{Tab}}$

Chapter 5: Liquid For Injection Proficiency 2

1. $\frac{mL}{15mg} \times 10mg = \frac{10}{15} = 0.7\ mL$

2. $\frac{3mL}{200mg} \times \frac{1000mg}{1g} \times 0.1g = \frac{300}{200} = 1.5\ mL$

3. $\frac{mL}{5000mcg} \times 1000mcg = 0.2\ mL$

4. $\frac{100mL}{1g} \times \frac{1g}{1000mg} \times 25mg = \frac{2500}{1000} = 2.5\ mL$

5. $\frac{mL}{0.4mg} \times 0.5mg = 1.3\ mL$

6. 13

7. $\frac{mL}{0.5mEq} \times 1.2mEq = \frac{1.2}{0.5} = 2.4\ mL$

8. $\frac{1000mL}{1g} \times 500mcg \times \frac{1g}{1000mg} \times \frac{1mg}{1000mcg} = 0.5mL$

9. A. 2mL Sterile water, Sodium chloride
B. 1g/2.6mL
C. $\frac{2.6mL}{1g} \times 1g = 2.6mL$
D. 2.6mL
E. In the vial Nothing is left
F. Discard the vial

10. A. 1.8mL
B. 250mg/mL
C. $\frac{1mL}{250mg} \times 300mg = \frac{300}{250} = 1.2mL$
D. 1.2 mL
E. Discard the vial
F. NO Discard vial.

Calculation of Basic IV Drip Rates

Chapter 4 Proficiency Test 2

1. $\frac{1\text{ hr}}{150\text{ mL}} \times 1000\text{ mL} = 6.7\text{ hrs} = 7\text{ hrs}$

B. $\frac{150 \times 10}{60} = 25\text{ gtt/min}$ macrodrip

$\frac{150 \times 60}{60} = 150\text{ gtt/min}$ micro

C. Macrotubing

2. 60 hr = 360 min

Micro

B. $\frac{100 \times 60}{360} = 17\text{ gtt/m}$

Use MicroDrip

Macro

$\frac{100 \times 10}{360} = \frac{3\text{ gtt}}{\text{min}}$

3. Bag is 250 mL NS, 100 mL can run leaving 150 mL NS. If using an infusion pump, you can set the volume to be infused at 150mL.

B. 3 hr = 180 minutes

Macro

$\frac{150 \times 15}{130} = \frac{2250}{180} = 13$ gtt/min

Micro - $\frac{150 \times 60}{180} = 50$ gtt/min

C. MicroDrip

4. 21 mL/hr ← $\frac{500 mL}{24 hr}$

5. $\frac{250 \times 10}{60} = 42$ gtt/min

Use a reconstitution device to add 100 mg powder to 250 mL & give IVPB over 1 hr

6. $\frac{10 mL}{1 g} \times 500 mg \times \frac{1 g}{1000 mg} = 5 mL$

B. $\frac{250 mL}{8 hr} = 31$ gtt/min

7. $24-4=20 \rightarrow 125 \times 20 = 2500\,mL$
$\rightarrow$ 75 mL x 4 times in 24 hr

$$\begin{array}{r} 75 \\ \times\ 4 \\ \hline 300 \end{array} + 2500 = 2800\,mL$$

8. 90 mL/hr

B. $\frac{1000}{90} = 11$ hrs

9. $mg = \frac{0.5g}{500mL} \times \frac{50mL}{hr} \times \frac{1000mg}{1g} \div \frac{2500}{500} = 50\,mg$

10. A. D5W 100 mL, Discard 25mL, Infuse 75 mL/hr

B. $\frac{75 \times 60}{90} = 50$ mL/hr

11. $150 \times 0.75 = 112.5\,mL$

$150 - 112.5 = 37.5$

12. $0.5 \times 500 = 250$

$500 - 250 = 250$ mL water

13. $0.25 \times 400 = 100$

$400 - 100 = 300$ mL water

14. 500 mL 1 Soda
Zero water

Self Test 4 # 1-2

Chapter 7 Special Types of IV Calc

1. A. 1.96 x 20 = 39 mg, Dose is Correct.
   B. $\frac{250}{0.5}$ = 500 mL/hr

2. A. 130 x 1.77 = 230 mg Correct
   B. $\frac{1 \text{ tab}}{100 \text{ mg}}$ x 230 mg = 2 100mg Tabs & 3 10mg Tab