Bethel College
Fundamentals of Nursing
Math/Drug Proficiency Fall Review 1 KEY

Calculate the following problems. Unless indicated, all medications involving mL greater than 1 should be rounded to the nearest tenth. Answers in mL that are less than 1 should be rounded to the nearest hundredth. All answers involving tablets should be recorded in terms of # of tabs (or ½ tabs).

1. \[15 \text{ mL} = \underline{0.5} \text{ oz.}\]
\[X \text{ oz} = 1\text{ oz}/30 \text{ mL} \times 15 \text{ mL}/1\]

2. \[60 \text{ mg} = \underline{1} \text{ gr.}\]
\[\text{gr } X = \text{ gr } 1/60 \text{ mg} \times 60 \text{ mg}/1\]

3. \[4 \text{ t} = \underline{20} \text{ mL.}\]
\[X \text{ mL} = 5 \text{ mL}/1 \text{ t} \times 4 \text{ t}\]

4. Prepare 660 mg of Duroquin. The tablets available are 330 mg. Give \underline{2} tab.
\[X \text{ tab} = 1 \text{ tab}/330 \text{ mg} \times 660 \text{ mg}/1\]

5. Glubionate -Ca syrup has a strength of 300 mg per 15 mL. Prepare a 0.5 g dosage. Give \underline{25} mL.
\[X \text{ mL} = 15 \text{ mL}/300 \text{ mg} \times 1000 \text{ mg}/1 \text{ g} \times 0.5 \text{ g}/1\]

6. Chloral hydrate capsules have a strength of gr 3 ¾. Prepare a 500 mg dosage. Give \underline{2} cap.
\[X \text{ cap} = 1 \text{ cap}/\text{gr 3 ¾} \times 1/60 \text{ mg} \times 500 \text{ mg}/1\]
7. Prepare a 25 mEq dosage of KCL (Potassium chloride) from a strength of 40 mEq per 30 mL. Give ________18.8_______mL.

\[ X \text{ mL} = \frac{30 \text{ mL}}{40 \text{ mEq}} \times 25 \text{ mEq} \]

8. The heparin solution available is 2500 units per mL. Draw up 1500 units dosage. Give ________0.6_______mL.

\[ X \text{ mL} = \frac{1 \text{ mL}}{2500 \text{ units}} \times 1500 \text{ units} \]

9. Prepare a gr 3/4 dosage of IM codeine from a solution with a strength of gr 1/2 per ml. Give ________1.5_______mL.

\[ X \text{ mL} = \frac{1 \text{ mL}}{\text{gr} \ 1/2} \times \text{gr} \ 3/4 \]

10. Ampicillin powder requires the addition of Saline prior to its IM administration. The label includes directions which could result in 3 DIFFERENT concentrations of this medication.

IT IS UP TO THE NURSE TO DETERMINE HOW TO PREPARE THIS MEDICATION FOR ADMINISTRATION.

<table>
<thead>
<tr>
<th>Amount Saline Added</th>
<th>Resulting Dosage Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.8 mL</td>
<td>100 mg/mL</td>
</tr>
<tr>
<td>16 mL</td>
<td>125 mg/mL</td>
</tr>
<tr>
<td>10.4 mL</td>
<td>300 mg/mL</td>
</tr>
</tbody>
</table>

A. The order is for a single IM dose of 200 mg. Which of the three dosage strength would you prepare? ___100, 125, 300___ mg/mL.

B. How much saline would you add in order to result in this dosage strength? ________19.8, 16, 10.4_______ mL.

C. How many mL of reconstituted medication would you need to draw up from this vial to provide your client with the 200 mg dose? ___2, 1.6, 0.67___ mL.

\[ X \text{ mL} = \frac{1 \text{ mL}}{100 \text{ mg}} \times 200 \text{ mg} \]

\[ X \text{ mL} = \frac{1 \text{ mL}}{125 \text{ mg}} \times 200 \text{ mg} \]

\[ X \text{ mL} = \frac{1 \text{ mL}}{300 \text{ mg}} \times 200 \text{ mg} \]
11. Aventyl 20 mg oral solution is ordered. Solution strength is 10 mg in 5 mL. Give _______10______mL.

\[ X \text{ mL} = \frac{5 \text{ mL}}{10 \text{ mg}} \times 20 \text{ mg/1} \]

12. The order is for Atropine 0.4 mg subcutaneous on call to surgery. Available is Atropine gr 1/200 per 2 mL. How many mL will you give? _______2.7_____mL.

\[ X \text{ mL} = \frac{2 \text{ mL}}{\text{gr 1/200}} \times \frac{1 \text{ gr}}{60 \text{ mg}} \times 0.4 \text{ mg/1} \]

13. The physician orders Keflex 1 gram stat, then 500 mg qid. The Keflex you have is Keflex 500 mg capsules. How many capsules will you give for the stat dose? _______2_______cap.

\[ X \text{ cap} = \frac{1 \text{ cap}}{500 \text{ mg}} \times \frac{1000 \text{ mg}}{1 \text{ g}} \times 1 \text{ g/1} \]

14. Codeine Tablets have a strength of 30 mg. Prepare a gr ¼ dosage. Give _______0.5______tab.

\[ X \text{ tab} = \frac{1 \text{ tab}}{30 \text{ mg}} \times \frac{1 \text{ gr}}{60 \text{ mg}} \times \frac{1}{4} \text{ gr/1} \]

15. The order is for Aminophyllin 300 mg PO. The stock Aminophyllin is 0.1 g tablets. How many tab will you need to give the client? _______3_______tab.

\[ X \text{ tab} = \frac{1 \text{ tab}}{0.1 \text{ g}} \times \frac{1 \text{ g}}{1000 \text{ mg}} \times 300 \text{ mg/1} \]

16. The physician has ordered Feosol Elixir 300 mg PO. You have Feosol Elixir 220 mg/5 mL. How many mL will you give? _______6.8_______mL.

\[ X \text{ mL} = \frac{5 \text{ mL}}{220 \text{ mg}} \times 300 \text{ mg/1} \]

17. The physician ordered Erythromycin 150 mg PO. The label states: Erythromycin 0.75 g/5 mL. How many mL should be administered? _______1_______mL.

\[ X \text{ mL} = \frac{5 \text{ mL}}{0.75 \text{ g}} \times \frac{1 \text{ g}}{1000 \text{ mg}} \times 150 \text{ mg/1} \]
18. Your client has a gastrostomy tube and is receiving 4 oz feeding every 4 hours which is followed by 30 mL water flush each time. How many mL will this client receive in 1 feeding? _______150_______mL.

\[ X \text{ mL} = 30 \text{ mL/1 oz} \times 4 \text{ oz/1} = 120 \text{ mL} + 30 \text{ mL} \]

19. The order is for PenVeeK 600,000 units per os (per mouth). You have 250 mg (400,000 units) per 5 mL. How many mL will you give? _______7.5_______mL.

\[ X \text{ mL} = 5 \text{ mL}/400,000 \text{ units} \times 600,000 \text{ units/1} \]

20. Ceclor 175 mg PO is ordered q 8 hours. The label states: Ceclor 250 mg/5 mL. How many mL should be administered? _______3.5_______mL.

\[ X \text{ mL} = 5 \text{ mL}/250 \text{ mg} \times 175 \text{ mg/1} \]

21. You have orders to give Digoxin 0.125mg. The ampule comes labeled 500 mcg per 2 mL. How much will you administer? _______0.5_______mL.

\[ X \text{ mL} = 2 \text{ mL}/500 \text{ mcg} \times 1000 \text{ mcg/1 mg} \times 0.125 \text{ mg/1} \]

22. You have orders to give Synthroid 0.3mg. The tablets come labeled 150 mcg. How many will you administer? _______2_______tab.

\[ X \text{ tab} = 1 \text{ tab}/150 \text{ mcg} \times 1000 \text{ mcg/1 mg} \times 0.3 \text{ mg/1} \]