Module 3: Calculating Medication Dosages - Practice Problems
Answers Using Dimensional Analysis

Problem	Dimensional Analysis
1. Order = gr 3/4 Available = 30 mg tablets Give_____	$x tablets = \frac{1 tab}{30 mg} \times \frac{60 mg}{gr 1} x \frac{gr 0.75}{1} = \frac{45}{30} = 1.5 tablets$ **Give 1.5 tablets**
2. Order = 100 mg Available = 125 mg/5 mL Give_____	$x mL = \frac{5 mL}{125 mg} x \frac{100 mg}{1} = \frac{500}{125} = 4 mL$ **Give 4 mL**
3. Order = 50 mg Available = 80 mg/2 mL Give_____	$x mL = \frac{2 mL}{80 mg} x \frac{50 mg}{1} = \frac{100}{80} = 1.25 = 1.3 mL$ **Give 1.3 mL**
4. Order = 0.5 g Available = 250 mg capsules Give_____	$x capsules = \frac{1 cap}{250 mg} \times \frac{1000 mg}{1 g} x \frac{0.5 g}{1} = \frac{500}{250} = 2 capsules$ **Give 2 capsules**
5. Order = 0.24 g Available = 80 mg per 7.5 mL Give_____	$x mL = \frac{7.5 mL}{80 mg} \times \frac{1000 mg}{1 g} x \frac{0.24 g}{1} = \frac{1800}{80} = 22.5 mL$ **Give 22.5 mL**
6. Order = 20 mg Available = 10 mg per 15 mL Give_____	$x mL = \frac{15 mL}{10 mg} x \frac{20 mg}{1} = \frac{300}{10} = 30 mL$ **Give 30 mL**
7. Order = 35 mg Available = 40 mg/2.5 mL Give_____	$x mL = \frac{2.5 mL}{40 mg} \times \frac{35 mg}{1} = \frac{87.5}{40} = 2.18 = 2.2 mL$ **Give 2.2 mL**
8. Order = 200 mg Available = 0.5 g per mL Give_____	$x mL = \frac{1 mL}{0.5 g} \times \frac{1 g}{1000 mg} x \frac{200 mg}{1} = \frac{200}{500} = 0.4 mL$ **Give 0.4 mL**

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9. Order = 0.05 mg Available = 50 mcg tablets Give_____	$x tablets = \frac{1 tab}{50 mcg} \times \frac{1000 mcg}{1 mg} x \frac{0.05 mg}{1} = \frac{50}{50} = 1 tablet$ **Give 1 tablet**
10. Order = 100 mg Available = 50 mg capsules Give_____	$x capsules = \frac{1 cap}{50 mg} \times \frac{100 mg}{1} = \frac{100}{50} = 2 capsules$ **Give 2 capsules**
11. Order = 250 mcg Available = 2.5 mg per 2 mL Give_____	$x mL = \frac{2 mL}{2.5 mg} \times \frac{1 mg}{1000 mcg} x \frac{250 mcg}{1} = \frac{500}{2500} = 0.2 mL$ **Give 0.2 mL**
12. Order = 120 mg Available = 0.12g tablets Give_____	$x tablets = \frac{1 tab}{0.12 g} \times \frac{1 g}{1000 mg} x \frac{120 mg}{1} = \frac{120}{120} = 1 tablet$ **Give 1 tablet**
13. Order = 1 g Available = 1000 mg tablets Give_____	$x tablets = \frac{1 tab}{1000 mg} \times \frac{1000 mg}{1 g} x \frac{1 g}{1} = \frac{1000}{1000} = 1 tablet$ **Give 1 tablets**
14. Order = Lanoxin 0.25 mg Available = Lanoxin 0.125 mg/tablet Give_____	$x tablets = \frac{1 tab}{0.125 mg} \times \frac{0.25 mg}{1} = \frac{0.25}{0.125} = 2 tablets$ **Give 2 tablets**
15. Order = Morphine gr 1/200 Available = Morphine 2 mg/mL Give_____	$x mL = \frac{1 mL}{2 mg} \times \frac{60 mg}{gr 1} x \frac{gr 0.005}{1} = \frac{0.3}{2} = 0.15 = 0.2 mL$ **Give 0.2 mL**
16. Order = Digitoxin 0.2 mg Available = Digitoxin 0.1 mg tablets Give_____	$x tablets = \frac{1 tab}{0.1 mg} \times \frac{0.2 mg}{1} = \frac{0.2}{0.1} = 2 tablets$ **Give 2 tablets**

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17. Order = KCL 20 mEq Available = KCL 8 mEq per 5 mL Give_____	$xmL = \frac{5mL}{8mEq} \times \frac{20mEq}{1} = \frac{100}{8} = 12.5mL$ **Give 12.5 mL**
18. Order = Synthroid 0.02 mg Available = Synthroid 0.01 mg/ 2 mL Give_____	$xmL = \frac{2mL}{0.01mg} \times \frac{0.02mg}{1} = \frac{0.04}{0.01} = 4mL$ **Give 4 mL**
19. Order = Augmentin 250 mg Available = Augmentin 500 mg/5 mL Give_____	$xmL = \frac{5mL}{500mg} \times \frac{250mg}{1} = \frac{1250}{500} = 2.5mL$ **Give 2.5 mL**
20. Order = Codeine Sulfate gr 1/2 Available = Codeine Sulfate 30 mg tablets Give_____	$xtablets = \frac{1tab}{30mg} \times \frac{60mg}{gr1} x \frac{gr0.5}{1} = \frac{30}{30} = 1tablet$ **Give 1 tablet**
21. Order = Diazepam 5 mg Available = Diazepam 10 mg tablets Give_____	$xtablets = \frac{1tab}{10mg} \times \frac{5mg}{1} = \frac{5}{10} = 0.5tablet$ **Give 0.5 tablet**
22. Order = Clinoril 800 mg Available = Dlinoril 400 mg tablets Give_____	$xtablets = \frac{1tab}{400mg} \times \frac{800mg}{1} = \frac{800}{400} = 2tablets$ **Give 2 tablets**
23. Order = Voltaren 450 mg Available = Voltaren 150 mg tablets Give_____	$xtablets = \frac{1tab}{150mg} \times \frac{450mg}{1} = \frac{450}{150} = 3tablets$ **Give 3 tablets**
24. Order = Coumadin 7.5 mg Available = Coumadin 5 mg tablets Give_____	$xtablets = \frac{1tab}{5mg} \times \frac{7.5mg}{1} = \frac{7.5}{5} = 1.5tablets$ **Give 1.5 tablets**

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25. Order = Phenobarbital 30 mg Available = Phenobarbital 15 mg/tablet Give_____	$x tablets = \frac{1 tab}{15 mg} \times \frac{30 mg}{1} = \frac{30}{15} = 2 tablets$ **Give 2 tablets**
26. Order = Tylenol gr X Available = Tylenol 300 mg tablets Give_____	$x tablets = \frac{1 tab}{300 mg} \times \frac{60 mg}{gr 1} x \frac{gr 10}{1} = \frac{600}{300} = 2 tablets$ **Give 2 tablets**
27. Order = Heparin 7500 units Available = Heparin 10,000 units/mL Give_____	$x mL = \frac{1 mL}{10000 units} \times \frac{7500 units}{1} = \frac{7500}{10000} = 0.75 = 0.8 mL$ **Give 0.8 mL**
28. Order = Capoten 12.5 mg Available = Capoten 25 mg tablets Give_____	$x tablets = \frac{1 tab}{25 mg} \times \frac{12.5 mg}{1} = \frac{12.5}{25} = 0.5 tablet$ **Give 0.5 tablet**
29. Order = Codeine gr 1 Available = Codeine 30 mg/tablet Give_____	$x tablets = \frac{1 tab}{30 mg} \times \frac{60 mg}{gr 1} x \frac{gr 1}{1} = \frac{60}{30} = 2 tablets$ **Give 2 tablets**
30. Order = Ciprofloxacin hydrochloride 375 mg Available = Ciprofloxacin hydrochloride 750 mg tablet Give_____	$x tablets = \frac{1 tab}{750 mg} \times \frac{375 mg}{1} = \frac{375}{750} = 0.5 tablet$ **Give 0.5 tablet**