<table>
<thead>
<tr>
<th>Problem</th>
<th>Dimensional Analysis</th>
</tr>
</thead>
</table>
| 1. Order: Solu-Cortef 150 mg  
Available: A vial of Solu-Cortef powder  
Directions: Add 1.8mL of sterile water to yield a solution of 250mg/mL  
a. What is the order? **150 mg**  
b. What is the available? **250mg/mL**  
c. How many mL will be administered? **0.6 mL**  

\[
x_{\text{mL}} = \frac{1\text{mL}}{250\text{mg}} x \frac{150\text{mg}}{1} = \frac{150}{250} = 0.6\text{mL}
\]

Give: **0.6 mL** |
| 2. Order: Claforan 665 mg  
Available: A vial of Claforan powder  
Directions: Reconstitute with 10mL of bacteriostatic water to yield a concentration of 95mg/mL  
a. What is the order? **665 mg**  
b. What is the available? **95 mg/mL**  
c. How many mL will be administered? **7 mL**  

\[
x_{\text{mL}} = \frac{1\text{mL}}{95\text{mg}} x \frac{665\text{mg}}{1} = \frac{665}{95} = 7\text{mL}
\]

Give: **7 mL** |
| 3. Order: Pfizerpen 1,000,000 units  
Available: A vial of Pfizerpen powder  
Directions: Add 1.6 mL of sterile water to give a concentration of 5,000,000 units/mL  
a. What is the order? **1,000,000 units**  
b. What is the available? **5,000,000 units/mL**  
c. How many mL will be administered? **0.2 mL**  

\[
x_{\text{mL}} = \frac{1\text{mL}}{5000000\text{unit}} x \frac{1000000\text{unit}}{1} = \frac{1000000}{5000000} = 0.2\text{mL}
\]

Give: **0.2 mL** |
| 4. Order: Streptomycin 0.25g  
Available: A vial of Streptomycin powder  
Directions: Reconstitute with 9mL of sterile water for a concentration of 400mg/2mL.  
a. What is the order? **0.25g**  
b. What is the available? **400mg/2mL**  
c. How many mL will be administered? **1.3 mL**  

\[
x_{\text{mL}} = \frac{2\text{mL}}{400\text{mg}} x \frac{0.25\text{g}}{1} x \frac{1000\text{mg}}{1\text{g}} = \frac{500}{400} = 1.25 = 1.3\text{mL}
\]

Give: **1.3 mL** |
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| 5. Order: Tazicef 0.6g  
Available: A vial of Tazicef powder  
Directions: Add 10 mL of sterile water. Each mL of solution contains 200mg.  
a. What is the order? 0.6g  
b. What is the available? 200mg/mL  
c. How many mL will be administered? 3 mL | $x\text{mL} = \frac{1\text{mL}}{200\text{mg}} \times \frac{0.6\text{g}}{1} \times \frac{1000\text{mg}}{1\text{g}} = \frac{600}{200} = 3\text{mL}$  
Give: 3 mL |
| 6. Order: Maxipime 0.75g  
Available: A vial of Maxipime powder  
Directions: Add 2.6mL of sterile water to yield 200mg/2mL  
a. What is the order? 0.75mg  
b. What is the available? 200mg/2mL  
c. How many mL will be administered? 7.5 mL | $x\text{mL} = \frac{2\text{mL}}{200\text{mg}} \times \frac{0.75\text{g}}{1} \times \frac{1000\text{mg}}{1\text{g}} = \frac{1500}{200} = 7.5\text{mL}$  
Give: 7.5 mL |
| 7. Order: Cefadyl 225mg  
Available: A vial of Cefadyl powder  
Directions: Reconstitute with 2mL of sterile water to yield a concentration of 500mg/2mL  
a. What is the order? 225 mg  
b. What is the available? 500mg/2mL  
c. How many mL will be administered? 0.9 mL | $x\text{mL} = \frac{2\text{mL}}{500\text{mg}} \times \frac{225\text{mg}}{1} = \frac{450}{500} = 0.9\text{mL}$  
Give: 0.9 mL |
| 8. Order: Zovirax 200mg  
Available: A vial of Zovirax powder  
Directions: Add 10mL of sterile water to yield 50mg/0.5mL  
a. What is the order? 200mg  
b. What is the available? 50mg/0.5mL  
c. How many mL will be administered? 2 mL | $x\text{mL} = \frac{0.5\text{mL}}{50\text{mg}} \times \frac{200\text{mg}}{1} = \frac{100}{50} = 2\text{mL}$  
Give: 2 mL |
| 9. Order: Suprax 200mg  
Available: A vial of Suprax powder  
Directions: Add 70mL of sterile water. Each teaspoon contains 100mg.  
a. What is the order? 200mg  
b. What is the available? 100mg/tsp  
c. How many mL will be administered? 10 mL (2 tsp) | $x\text{mL} = \frac{1\text{tsp}}{100\text{mg}} \times \frac{200\text{mg}}{1} \times \frac{5\text{mL}}{1\text{tsp}} = \frac{1000}{100} = 10\text{mL}$  
Give: 10 mL |
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| 10.     | **Order:** Ciprofloxocin 375mg  
**Available:** A vial of Ciprofloxocin powder  
**Directions:** Add 10mL of sterile water to yield a solution of 37.5mg/mL.  

a. What is the order? **375mg**  
b. What is the available? **37.5mg/mL**  
c. How many mL will be administered? **10 mL**  

\[
x mL = \frac{1 mL}{37.5 mg} \times \frac{375 mg}{1} = \frac{375}{37.5} = 10 mL
\]

**Give:** 10 mL |