Practice 1: Determine the mass of solute that would be required to make each of the following solutions:

1. 40 mL of 0.7 M KBr
2. 300 mL of 2.5 M HCl
3. 70 mL of 0.5 M BaS

Answers:

1. 40 mL of 0.7 M KBr.

Start with the volume of solution:	First, use molarity as a conversion factor to convert to moles:	Then, use molar mass as a conversion factor to convert to mass:	**To find the mass of solute required!**
40 mL	$\frac{0.7 \text{ mol KBr}}{1000 \text{ mL}}$	$\frac{119.002 \text{ g KBr}}{\text{mol KBr}}$	= 3.33 g KBr

2. 300 mL of 2.5 M HCl.

Start with the volume of solution:	First, use molarity as a conversion factor to convert to moles:	Then, use molar mass as a conversion factor to convert to mass:	**To find the mass of solute required!**
300 mL	$\frac{2.5 \text{ mol HCl}}{1000 \text{ mL}}$	$\frac{36.458 \text{ g HCl}}{\text{mol HCl}}$	= 27.3 g HCl

3. 70 mL of 0.5 M BaS.

Start with the volume of solution:	First, use molarity as a conversion factor to convert to moles:	Then, use molar mass as a conversion factor to convert to mass:	**To find the mass of solute required!**
70 mL	$\frac{0.5 \text{ mol BaS}}{1000 \text{ mL}}$	$\frac{169.39 \text{ g BaS}}{\text{mol BaS}}$	= 5.93 g BaS