

>> What is the volume percent of a solution containing 15 milliliters of HCl in 75 milliliters of water? Ok, what we want to do is figure out what we know first. Volume percent we know has units of percent volume over volume. And so that's going to mean either liters over liters or milliliters over milliliters. Ok? You notice we've got milliliters for both of our units, so we're good on that. Now we have to identify what is our solute and what is our solvent? A solute is a substance that's present in a smaller amount. And 15 is a smaller amount than 75, so our solute then will be HCl. That leaves then the larger amount to be our solvent. So our solvent is water. We want to make sure we identify that because remember in the numerator of our answer we're going to use solute. And so we would want to put the smaller of the two numbers up here. So we have 15 divided by the sum of 15 plus 75, so that's down here. So it would be 15 divided by 90. And then times 100 for the percent gives us 17% V over V for our units. Going back and looking at significant figures, 15 and 75 each have two sig figs. Our answer has two significant figures.