>> If 1.04 liters of carbon monoxide gas at 8 degrees C exerts a pressure of .900 atmosphere, how many grams of gas are there? Okay. Again, we can look for our information. We have 1.04 liters, that's our volume; 8 degrees C, that's our temperature; .900 atmospheres, that's our pressure; and how many grams is our question. So putting our information down, you can see here's our pressure, our volume. Now we're asked for grams. We don't usually do grams when we do PV equals nRT. We're looking actually here for mols. But we do know that if we solve for mols, we can then convert mols to grams. So this is what we're going to be looking for is n in this equation. Temperature, of course, would be 281 Kelvin. And in this situation we're going to use an R value of .0821 so that we have atmosphere to match the atmosphere up here in order to cancel out units. Now PV equals nRT, this is similar to the last problem we had where we're solving for n. So just rearranging, we ended up with n equals PV over RT. Again, we're taking what we have here and plugging into the appropriate places. And now we can see how things start canceling out. We have atmospheres canceling out, and liters canceling out, Kelvin canceling out. And, again, we end up with mols in our answer. Our answer turns out to be .0406 mols and that's carbon monoxide. Now, going back to what did they ask us for? They asked us for how many grams. So we haven't answered that question yet. We have to do one more step taking our mols and converting it to grams. And we are using the molar mass of carbon monoxide which is 28.01 grams per mol. Now you can see, again, we're going to cancel out units. .0406 times 28.01 will give us the 1.14 grams of carbon monoxide.