

>> Diane Jewell: Polonium 214 is an alpha emitter. Write the balanced equation. This may sound like a different kind of question, but it's actually the same exact question that we've already had. Instead of saying there's an alpha decay, we're saying that this is an alpha emitter. It means the same thing, though. So you're going to then write down your equation, your Polonium 214. Look at your periodic table, find PO, it's going to be an 84 for the atomic number. It's an emitter which means it's a decay. So automatically you put the arrow in with nothing else on the left hand side. Now, it's an alpha particle being emitted so there's your helium 42. And then here is whatever is going to be left that we have to solve for so we can finish writing the equation, okay? Again, we'll do the mass which is our top numbers, 214 equals 4 plus x, so get rid of those 4s. We know that 210 equals x. Doing the bottom numbers 84 equals 2 plus y, so getting rid of the plus 2 we have 82 equals y, okay? Think about it, which number there now is going to tell us what our element is? It will be this one right here, the atomic number. So we're looking at it for atomic number 82 on the periodic table, we find Pb. So we know now that our answer for that is lead 210. And the actual question is write the balanced equation. So you can go back now, and then 82 and Pb to finish writing your equation.