>> What product results from this alpha bombardment? OK, you might be given a problem that says this, and then you'll be given an equation. You don't have to come up with your own equation for a bombardment, usually. OK, some things I really would recommend you do is to memorize these. Because you're going to need to know these for a test. A proton is always 1 over 1. An electron is always 0 over -1. A neutron is always 1 over 0. And, of course, that alpha particle will always be 4 over 2. OK? So let's take a look at what we have here. We're going to handle this the same way we've been handling everything: we're going to balance mass, we're going to balance charge. So let's just work on mass first. We have 10 plus 1 plus x. 1 plus x. Oh, OK, so now we have an algebra equation. 10 plus 4 is 14, so 14 equals 1 plus x. To get rid of that 1 and get the x by itself, we're going to subtract both sides by – with a -1. OK, so 1 minus 1, we'll get rid of that. 14 minus 1 is 13. Now the top number is going to be 13. So I'm going to go ahead and put that right up here. OK. Now let's do the charge. Charge, remember, are those bottom numbers. So we have 5 plus 2 – well, that's 7 – equals – here's my equals – 0 plus – whoops, 0 plus y. And so 0 plus y. 7 then, get rid of that 0. 7 equals y. So we can put the 7 down here. When we look on the periodic table, we find that the number 7 corresponds to nitrogen. And so go back and look and see if you answered the question. It says, what product results? Yeah, this product is nitrogen 13, it is the result of the alpha bombardment of boron 10. One thing I want to point out to you is that this is a bombardment, it's not a decay. Remember what I kept saying before. When you have a decay, if you have a decay of boron, that's the only thing on this side of the equation. But when you're bombarding something, you're throwing something in there hard enough to actually knock a particle out of this boron. And so by hitting it so strongly with this particle, you knock out a neutron, you're also taking this and putting in two neutrons and two electrons. And so these are actually combining. So in a bombardment, you're going to have more than one item on the left of your equation. But in a decay, you'll only have the one. So if I were to have not given you this right here and I just gave you this equation – first off, and I said solve it and then tell me, is this a bombardment or is this a decay? First off, you would go ahead and balance it and solve it, and then you would look at it and go, aha, this is not alone; it's a bombardment. OK, so that would be another question you might get, and that would be how you would answer that question.