

>> Balance the equation. Is it a decay or is it a bombardment? And what kind of decay or bombardment is it? Okay, so you would be given this equation and you would have to first off, without doing anything, you can answer this question, is it a – is it a decay or is it a bombardment? Remember, a decay is all by itself. A bombardment is not all by itself. So, just looking at what you have before the arrow, you've got two particles here, that means bombardment. So, we can answer that one right away, that's going to be a bombardment, okay? So, now let's go ahead and balance the equation. So, let's do our – balance or masses  $9 + x = 10$ , so we got  $9 + x = 10$ . We got to get rid of this plus 9 here by subtracting 9 from both sides.  $10 - 9 = 1$  so we know now that the top number is going to be a 1, okay? Now let's go ahead and balance the charges on the bottom. We have  $4 + y = 4$ , and so I've written that here. I want to get y by itself, so we can go ahead and subtract 4 from both sides. We end up with  $y = 4 - 4 = 0$ , so now we have our bottom number 0. Remember before I said, memorize these things? This is why you need to memorize because now this is what you've got. Something has one atomic mass unit, as a mass, but it has no charge. Now if you think about it, protons have a plus 1 charge, it's not a proton. Electrons have a negative 1 charge, it's not an electron. Positive – a proton – a positron has a plus 1 charge, it's not a positron. Alpha particle has a plus 2 up – down here it's out [inaudible], it's not a helium, okay? It's not an alpha particle. What is it that has one atomic mass unit and it's neutral, it has a zero charge? And that should tell you something, it's neutral. What word sounds like neutral. that's your neutron, okay? And so, now you can put the last piece of information in here. You've balanced it. You've identified it as a bombardment and you've figured out what kind. This would be considered a neutron bombardment, that answers what kind.