>> Diane Jewell: Calculate the pH when a solution has a hydronium ion concentration of 1.0 times 10 to the negative 11 molar. Okay, what we were doing now, we want to figure out pH. pH is always– what pH is, it's the negative of the log of this concentration here. Okay? When we have a situation where the coefficient, in scientific notation here, is a 1, we have a very simple way of calculating pH. Any time it's 1 times 10 to a negative number, all you do is simply take the exponent, without the negative part of it, that becomes the pH. So since this is a negative 11 power, the pH is 11. Now what do we do here? Well we have 1 times 10 to the negative 11; here you see it's 1.0, we have two digits. What those two digits tell us is that as far as significant figures, we would put a decimal point with two decimal places in our pH value. So instead of saying it has a pH of 11, you would actually say this has a pH of 11.00, reflecting the two digits here. Now the second one, hydronium ion concentration of 1.00 times 10 to the negative third. Again, do the same thing. You see this is a value of 1, so we only have to take the absolute value of our power, which is going to be 3, so our pH is 3. Now looking at our coefficient here, we have 3 digits, which means after the decimal point, we're going to put three zeros. So our pH for this right here is going to be 3.000. Our third one is 1 times 10 to the negative 6. Absolute value of negative 6 is simply 6, so our pH value is 6. Now, looking at our coefficient here, we have one decimal place, or I'm sorry, one digit. Therefore, there's going to be one decimal place after the decimal point. So our pH in this situation is simply pH 6.0.