>> Diane Jewell: Calculate the equilibrium constant expression when the equilibrium concentrations of the reactants are 0.20 molar and of hydrogen iodine is 1.47 molar. Okay. Here we have our equation. We have hydrogen gas plus iodine gas will form reversibly two moles of hydrogen iodide, and that's also a gas. So the first thing I did was I put the information below each item in this equation. The reactants are both in the concentration of 0.20 molar once they reach equilibrium. So at equilibrium we have 0.20 molar. This 0.20 molar. This. And 1.47 molar. This. Okay? This is the information they've given us. Now the question they've asked us is what is K sub C. What is the value. So what we need to do now is set up our expression. K sub C equals. Now here's our product. So that goes on the – in the numerator. We have the coefficient 2. So it will be to the second power. And then here we have two reactants. So they'll both be down here in the denominator. Both of them show that there's just a coefficient of 1 so we don't have to write a power for either one of those. Okay? So here's our equilibrium constant expression. Now we have to solve for K sub C. We're going to go ahead and put in the equilibrium concentrations. When we put brackets like this around our items, what we're saying is the concentration. So those brackets indicate concentration of whatever you find within. So the concentration of hydrogen iodine is 1.47. And of course that's going to be squared. And then for each one of those it's the 0.2 times the 0.2. Once we put this in to our calculator and solve, we find that K sub C equals 54. Now notice even though these are concentrations, I didn't put molar in any of my calculations. And it's because we don't end up with units when we solve anyway. So we really don't want to put molar in there to begin with.