>> Diane Jewell: Write the dissociation constant expression for formic acid. Okay. You notice I didn't give you information on this one other than you talking about formic acid. So if you look in your book on table 10.4, you have a listing of various weak acids. Formic acid is listed there as HCOOH. Okay? Now dissociation means you're putting that formic acid in to water, and it's going to dissociate in to hydronium ion and then the conjugate base to formic acid. But you notice that we have a reversible reaction here. We have the arrow going in two directions. That's indicating to us that that is a weak acid. In other words, as we put the formic acid in water, and they start combining to form these two ions, the ions will then sometimes crash together and reform in to water and formic acid. And so you have this – The forward reaction going in this direction, and the reverse reaction going in this direction until you get to a point where the amounts of each of those four components no longer changes. At that point the forward and the reverse reactions are equal to each other. They're in equilibrium. And so that's what we talk about when we talk about equilibrium constants expression. Now this is an acid so instead of K sub C, we have K sub A to indicate it is an acid. There's something a little different from this now. You'll notice, first off, these are not gasses because we're talking about putting acid in water. Okay? Second thing you'll notice is water is not listed in the denominator. Even though we list it up here as one of the reactants. Now the reason we don't list the water is because water is in excess. We have a lot of water here, and we're putting a little bit of acid in. And so really if we wanted to be accurate, we would also have water listed on this side too because once the reaction occurred we would still have a lot of water. And water being over here, and water being over here, they would cancel each other out. Top and bottom. Water. Water. Would cancel out. And so you really don't have to put water in there. It would be actually incorrect to put the water in there because the water doesn't change its concentration. We want to see a reflection of the change of concentration of each of these three components, and so this is your dissociation constant for an acid, your two products over your acid that you put in to begin with.