

>> Diane Jewell: Calculate the equilibrium constant when the equilibrium concentrations are as follows. Nitrogen is 0.20 molar. Hydrogen: 0.60 molar. And ammonia: 0.040 molar. Okay. Something I want to point out. We're talking about equilibrium concentrations. Equilibrium concentration simply means we've started with ammonia. We let it react. It forms hydrogen, and it forms nitrogen in a reversible reaction. And once the levels have stopped changing, the amounts of each one of these has stopped changing, we say it's come to equilibrium. And these are the amounts of each one of these we find once they stop changing. Okay? So this is equilibrium concentrations. So our equilibrium constant is going to be this concentration to the third power times this concentration, and we see that in our numerator, divided by this concentration to the second power, and we see that in the denominator. Again, these are the pieces of information we had from the problem. We went ahead and put them right in to the appropriate places. Make sure you don't forget to cube your 0.60 or square your 0.4040 when you're doing your calculations. When you do, your calculator will give you the answer 27.