CE 329 Fall 2015

Class 8 Worksheet

Check that the mechanism is valid (is there a linear combination of the steps that equals the overall reaction?)

List the stable species:

List the reactive intermediates:

Set the rate of the overall reaction equal to the forward rate of the rate-determining step

If the rate expression contains concentrations of reactive intermediates, write equilibrium expressions for all steps except the rate-determining step

Solve the equilibrium expressions to get expressions for the concentrations of the reactive intermediates

Substitute the expressions for the reactive intermediate concentrations into the rate expression and
simplify.

Repeat for the other two cases.

Instead of assuming a rate determining step, use the Bodenstein steady state approximation.