## Answer on the question \#61982, Chemistry / General chemistry

## Question:

In the reaction mechanism below, predict rate law expression, identify intermediate, catalysts, and determine the overall reaction.
A+B+Z ---> 2C+D (Fast)
2C ---> E+F (Fast)
E+G ---> H+Z (Slow)

## Answer:

A+B+Z ---> 2C+D (Fast) - catalysts reaction
2C ---> E+F (Fast) - overall reaction
E+G ---> H+Z (Slow) - intermediate reaction
When we want to determine the overall rate law for a reaction mechanism, the slowest step is the step that determines the reaction rate:

$$
r=k \cdot[E] \cdot[G]
$$

