Experimental [H_2] (mol/L)		Initial [ICl] (mol/L)	Initial Rate of Reaction (mol/s•L)
1	.30	.20	3.0×10^{-3}
2	.30	.60	9.0×10^{-3}
3	.10	.60	1.0×10^{-3}

1. The above chart contains experimental data obtained from the following reaction:

   $H_2 + 2\ ICl \rightarrow I_2 + 2\ HCl$

   What is the experimental rate law for this reaction?

   A) Rate = $k[H_2]/[ICl]$
   B) Rate = $k[H_2][ICl]$
   C) Rate = $k[H_2][ICl]^2$
   D) Rate = $k[H_2]^2[ICl]^2$
   E) Rate = $k[H_2]^2[ICl]$

2. A student collected the initial-rate data in the chart below.

Experiment	Initial [XO] (mol/L)	Initial [O_2] (mol/L)	Initial rate of formation of XO_2 [mol/(L·s)]
1	0.20	0.20	0.40
2	0.80	0.20	6.4
3	0.20	0.40	0.80

   What is the experimental rate law for this reaction?

   A) rate = $k\ [XO]^2[O_2]^{-1}$
   B) rate = $k\ [XO][O_2]^{-1}$
   C) rate = $k\ [XO]^2\ [O_2]$
   D) rate = $k\ [XO]\ [O_2]^2$
   E) rate = $k\ [XO]^2\ [O_2]^2$