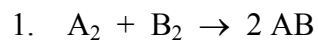


Reaction Order and Rate Law Expression Worksheet

Given the following equations and experimental data, write the correct

- a. Rate Law Expression
- b. Reaction Order
- c. Determine k, the Specific Rate Constant (including units)

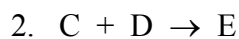


Exp #	[A ₂]	[B ₂]	Rate (mole dm ⁻³ s ⁻¹)
1	0.001	0.001	0.01
2	0.001	0.002	0.02
3	0.001	0.003	0.03
4	0.001	0.004	0.04
5	0.002	0.004	0.16
6	0.003	0.004	0.36

a.

b.

c.



Exp #	[C]	[D]	Rate (mole dm ⁻³ s ⁻¹)
1	0.1	0.01	0.02
2	0.1	0.02	0.04
3	0.1	0.03	0.06
4	0.1	0.04	0.08
5	0.2	0.04	0.08
6	0.3	0.04	0.08

a.

b.

c.

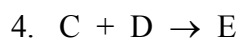


Exp #	[F]	[G]	Rate (mole dm ⁻³ s ⁻¹)
1	0.01	0.4	0.02
2	0.02	0.4	0.04
3	0.03	0.4	0.06
4	0.1	0.2	0.10
5	0.1	0.4	0.20
6	0.1	0.6	0.30

a.

b.

c.

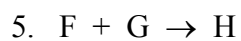


Exp #	[C]	[D]	Rate (mole dm ⁻³ s ⁻¹)
1	0.1	0.01	0.02
2	0.1	0.02	0.08
3	0.1	0.03	0.18
4	0.1	0.04	0.32
5	0.2	0.04	1.28
6	0.3	0.04	2.88

a.

b.

c.



Exp #	[F]	[G]	Rate (mole dm ⁻³ s ⁻¹)
1	0.01	0.4	0.02
2	0.02	0.4	0.16
3	0.03	0.4	0.54
4	0.1	0.2	5
5	0.1	0.4	20
6	0.1	0.6	45

a.

b.

c.