

$$\text{rate} = k [\text{B}] [\text{C}]^2$$

Initial rate (mol dm ⁻³ s ⁻¹)	Change in concentration of reagents	Effect on rate	New initial rate (mol dm ⁻³ s ⁻¹)
2.5	[A] × 3	none	2.5
0.75	[B] × 4	× 4	3.0
12	[C] × 10	× 100	1200
0.50	[D] × 5	none	0.50
0.25	[A] ÷ 4	none	0.25
2.8	[B] ÷ 10	÷ 10	0.28
3.5	[C] ÷ 3	÷ 9	0.39
0.80	[D] ÷ 2	none	0.80
10.3	[A] × 2, [B] × 2	× 2	20.6
6.5	[B] × 2, [C] × 3	× 18	117
12.5	[A] × 2, [B] ÷ 3	÷ 3	4.17
4.8	[B] × 3, [C] ÷ 2	× 3/4	3.6
12.5	[A] × 6, [B] ÷ 4, [C] × 2	None (effects cancel)	12.5
2.9	[A] × 2, [B] × 10, [C] ÷ 1.5	× 4.44	12.9
15.5	[B] × 3, [C] × 10, [D] ÷ 10	× 300	4650

$$\text{rate} = k [\text{P}]^2 [\text{T}]$$

Initial rate (mol dm ⁻³ s ⁻¹)	Change in concentration of reagents	Effect on rate	New initial rate (mol dm ⁻³ s ⁻¹)
6.0	[P] × 2	× 4	24
5.0	[Q] × 5	None	5
10.0	[R] × 3	None	10
0.80	[T] × 4	× 4	3.2
8.0	[P] ÷ 3	÷ 9	0.89
12.5	[Q] ÷ 2	None	12.5
60	[R] ÷ 5	None	60
50	[T] ÷ 10	÷ 10	5
12	[P] × 2, [Q] × 2	× 4	48
10	[P] × 2, [T] × 3	× 12	120
40	[Q] × 2, [T] ÷ 3	÷ 3	13.3
25	[R] × 3, [T] ÷ 2	÷ 2	12.5
10	[P] × 4, [Q] ÷ 2, [T] × 2	× 32	320
20	[P] × 2, [Q] × 10, [T] ÷ 1.5	× 2.67	53.3
30	[P] × 3, [Q] × 10, [T] ÷ 10	× 0.9	27
5	[P] ÷ 2, [Q] ÷ 2, [T] ÷ 3	÷ 12	0.42
12	[P] × 2, [Q] ÷ 10, [T] × 5	× 20	240
16	[P] ÷ 3, [Q] ÷ 2.5, [T] × 3	÷ 3	5.33
8	[P] × 2.5, [Q] ÷ 4, [T] ÷ 2	× 3.125	25