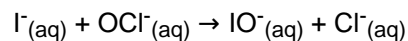


Directions: Read the passage below and answer the question(s) that follow.

Ch.12-26

Intro

The reaction



was studied, and the following data were obtained:

| $[\text{I}^{-}]_0$ | $[\text{OCl}^{-}]_0$ | Initial Rate |
|--------------------|----------------------|----------------------|
| mol/L | mol/L | mol / L•s |
| 0.12 | 0.18 | $7.91 \cdot 10^{-2}$ |
| 0.060 | 0.18 | $3.95 \cdot 10^{-2}$ |
| 0.030 | 0.090 | $9.88 \cdot 10^{-3}$ |
| 0.24 | 0.090 | $7.91 \cdot 10^{-2}$ |

1 What is the order of the reaction with respect to I^{-} ?

- A. 0
- B. 1
- C. 2
- D. 3

2 What is the order of the reaction with respect to OCl^{-} ?

- A. 0
- B. 1
- C. 2
- D. 3

3 Write the rate law for the reaction.

4 Calculate the rate constant for the reaction.

- A. 31
- B. 20.
- C. 9.9
- D. 3.7

Directions: Read the passage below and answer the question(s) that follow.

Ch.12-28

Intro

The following data was obtained for the reaction



[ClO₂]₀ [OH⁻]₀ Initial Rate

mol/L mol/L mol / L•s

0.0500 0.100 5.75•10⁻²

0.100 0.100 2.30•10⁻¹

0.100 0.0500 1.15•10⁻¹

5 What is the order of the reaction with respect to ClO₂?

- A. 0
- B. 1
- C. 2
- D. 3

6 What is the order of the reaction with respect to OH⁻?

- A. 0
- B. 1
- C. 2
- D. 3

7 What is the value of the rate constant for this reaction?

- A. 12
- B. 120
- C. 230
- D. 2300

8 Calculate the initial rate for an experiment with [ClO₂]₀ = 0.175 mol/L and [OH⁻]₀ = 0.0844 mol/L.