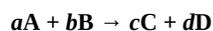


## 5.13: ADDITIONAL EXERCISES

### KINETICS AND THE RATE EQUATION

5-1 For a chemical reaction, what is the rate equation used to correlate?

5-2 Write the rate equation that describes the rate of the following reaction.



5-3 What is the overall order of the following reaction with multiple reactants?

$$\text{Rate} = k [A]^1[B]^{1/2}$$

### HALOGENATION OF ALKANES

5-4 For the following compounds, give all possible monochlorinated derivatives.

(a)



(b)



(c)



(d)



(e)



(f)



5-5 For the following compounds, identify the major product of free-radical bromination.

(a)



(b)



(c)



(d)



5-6 Explain why radical bromination is significantly more selective than radical chlorination.

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