

Exercise 11.2

Nucleophiles and Electrophiles

1. Fill in each blank with either “nucleophile” or “electrophile”, as appropriate.

In organic chemistry, a(n) _____ is an electron pair donor and a(n) _____ is an electron pair acceptor. The _____ may contain a leaving group, a group that must leave so that an atom in the _____ can form a new bond.

When we use curved arrows to show the movement of electrons in a reaction, the arrows show the flow of electrons from the _____ to the _____. This means that the arrow drawn between these two reactants points from an atom or bond in the _____ to an atom in the _____.

2.

- (a) Give an example of a nucleophile that is a neutral molecule.

- (b) Give an example of a nucleophile that is an ion.

- (c) Give an example of an electrophile that is a neutral molecule.

- (d) Give an example of an electrophile that is an ion.