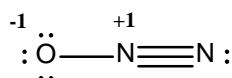


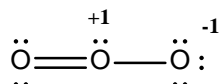
Answers to Exercise 8.2 Assigning Formal Charge

1. *It is standard practice to write only the non-zero formal charges on the diagram. Atoms left blank are assumed to have formal charges of zero.*

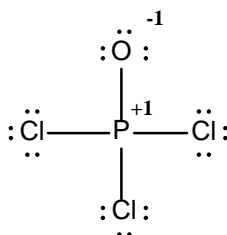
(a)



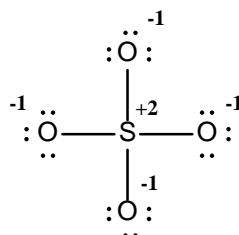
(b)



(c)



(d)



2.

(a)

4

(b)

2

(c)

2

(d)

1

(e)

1

(f)

3

(g)

1

(h)

4

3.

(a)

0

(b)

2

(c)

2

(d)

3

(e)

0

(f)

1

(g)

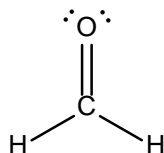
3

(h)

0

4.

(a)



(b)

1. all atoms obey the octet rule (in the initial structure, the carbon atom did not)

2. formal charges have been minimized