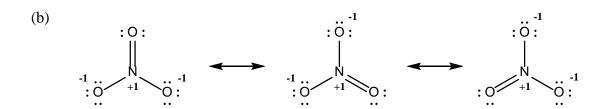
Answers to Exercise 8.4 Drawing Resonance Structures



2. (a) NO_2^- bond order $=\frac{2+1}{2}=1\frac{1}{2}$

 NO_3^- bond order = $\frac{2+1+1}{3} = 1\frac{1}{3}$

(b) The N-O bond order is greater for NO_2^- . As such, the N-O bonds in NO_2^- are shorter than the N-O bonds in NO_3^- .

plus one more electron pair shared by the two oxygen atoms

plus two more electron pairs shared by the three oxygen atoms