Steps for Lewis Structures:
1. Determine the total number of valence electrons. Add electrons for negative charges, subtract electrons for positive charges.
2. Place least electronegative atom (except H) as central atom in structure.
4. "Sprinkle" remaining electrons around outside atoms first to complete octets. Don't use more electrons than the total found in step 1. Then complete the central atom's octet last if you have enough electrons.
5. Make double or triple bonds as needed to complete octets.
6. Place brackets and charge for ions.

For the central atom in each formula, draw the Lewis Structure with all valence electrons shown. Make sure to minimize formal charge where applicable and note all nonzero formal charges on the Lewis Structure. Draw all resonance structures where applicable.

1. SCN$^-$
2. SO$_4^{2-}$
3. NH$_4^+$
4. PH$_3$
5. H$_2$O
6. SeO$_2$
7. CH$_2$Cl$_2$
8. O$_3$
9. CO$_3^{2-}$
10. CH$_2$O
11. ClF$_3$
12. H$_2$O$^+$
13. BrO$_2^-$
14. PF$_3$
15. SF$_6$
16. SO$_4^{2-}$

The $\Theta$ minus with a circle around it is the symbol for a -1 formal charge. If you note the formal charge on each nonzero formal charge atom, you do not have to use brackets (step 6 above).

octets complete, look at formal charge: way too much formal charge! Sulfur can have an expanded octet, so minimize formal charge:

\[ \text{O} = \text{S} - \text{O} \]

Two other resonance structures
3. \( \text{NH}_4^+ \)
\[
\begin{align*}
5+1\times4-1 &= 8 e^- \\
\hline
&= \text{H}^+ \\
&= \text{N}^6- \\
&= \text{H} \\
\hline
&= \text{H}
\end{align*}
\]

4. \( \text{PH}_3 \)
\[
\begin{align*}
5+1\times3 &= 8 e^- \\
\hline
&= \text{H} \text{P} \text{H} \\
\hline
&= \text{H}
\end{align*}
\]

5. \( \text{H}_2\text{O} \)
\[
\begin{align*}
1\times2+6 &= 8 e^- \\
\hline
&= \text{H} \text{O} \text{H} \\
\hline
&= \text{H}
\end{align*}
\]

6. \( \text{SeO}_2 \)
\[
\begin{align*}
6+2\times6 &= 18 e^- \\
\hline
&= \Theta \text{Se} \Theta \\
&= \text{O} \text{O} \text{Se} \text{O} \\
&= \text{O} \text{Se} \text{O} \\
\hline
&= \text{O} \text{Se} \text{O}
\end{align*}
\]

\( \text{Se} \) can have an expanded octet.

7. \( \text{CH}_2\text{Cl}_2 \)
\[
\begin{align*}
4+1\times2+7\times2 &= 20 e^- \\
\hline
&= \text{C} \text{Cl} \text{H} \\
&= \text{Cl} \text{C} \text{H} \\
\hline
&= \text{Cl}
\end{align*}
\]

8. \( \text{O}_3 \)
\[
\begin{align*}
6\times3 &= 18 e^- \\
\hline
&= \text{O} \text{O} \text{O} \\
\hline
&= \text{O} \text{O} \text{O} \\
\hline
&= \text{O} \text{O} \text{O}
\end{align*}
\]

\( \text{O} \text{O} \text{O} \) is one other resonance structure.

\( \text{O} \) is the final answer because the Octet Rules. \( \text{O} \) cannot have an expanded octet.
9. \( \text{CO}_3^{2-} \)
   \[ 4 + 6 \times 3 + 2 = 24 \text{e}^- \]
   \[ \text{O} = \text{C} \equiv \text{O} \]
   must complete octets before worrying about FC
   \[ \text{Final answer: also has 2 other resonance structures:} \]
   \[ \text{O} = \text{C} - \text{O} \]

10. \( \text{CH}_2\text{O} \)
    \[ 4 + 1 \times 2 + 6 = 12 \text{e}^- \]
    \[ \text{H} \]
    \[ \text{H} - \text{C} = \text{O} \]

11. \( \text{ClF}_3 \)
    \[ 7 + 7 \times 3 = 28 \text{e}^- \]
    \[ \text{F} = \text{Cl} = \text{F} \]

Yes, chlorine has an expanded octet.

12. \( \text{H}_2\text{O}^+ \)
    \[ 1 \times 3 + 6 - 1 = 8 \text{e}^- \]
    \[ \text{H} \]
    \[ \text{H} - \text{O}^+ - \text{H} \]

Yes, oxygen has a positive formal charge because:
\[ \text{The Octet Rule Rules!!} \]

13. \( \text{BrO}_2^- \)
    \[ 7 + 6 \times 2 + 1 = 20 \text{e}^- \]
    \[ \text{O} = \text{Br} - \text{O}^- \]
    Bromine can have an expanded octet
    Also has 1 other resonance structure:
    \[ \text{O} = \text{Br} - \text{O}^- \]
14. PF_{5} 
\[ 5 + 7 \times 5 = 40e^- \]

15. SF_{6} 
\[ 6 + 7 \times 6 = 48e^- \]

16. SO_{4}^{2-}

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too much formal charge!

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... too many dots. You get the point