



Name _____

Block _____

Key

Lewis Dot Structures (Section 6.2)

Draw a correct Lewis dot structure for each of the following.

1.) HBr <u>18</u>	$H-\overset{\cdot\cdot}{\underset{\cdot\cdot}{Br}}:$	7.) NO ₂ ⁻ 5 + 2(6) + 1 = <u>18</u>	$[\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}-\overset{\cdot\cdot}{N}=\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}]^{-}$ <i>resonance</i>
2.) PH ₃ <u>18</u>	$H-\overset{\cdot\cdot}{\underset{\cdot\cdot}{P}}-\overset{\cdot\cdot}{H}$ $\quad $ $\quad H$	8.) H ₃ O ⁺ <u>18</u>	$[H-\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}-H]^{+}$ $\quad $ $\quad H$
3.) HCN <u>10</u>	$H-C\equiv N:$	9.) NO ⁺ <u>10</u>	$[:N\equiv O:]^{+}$
4.) OF ₂ <u>20</u>	$:\overset{\cdot\cdot}{F}-\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}-\overset{\cdot\cdot}{F}:$	10.) N ₂ <u>10</u>	$:N\equiv N:$
5.) HClO <u>14</u>	<i>(oxyacid)</i> $H-\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}-\overset{\cdot\cdot}{Cl}:$	11.) O ₂ <u>12</u>	$\overset{\cdot\cdot}{O}=\overset{\cdot\cdot}{O}$
6.) PO ₄ ³⁻ <u>32</u>	$[\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}-\overset{\cdot\cdot}{\underset{\cdot\cdot}{P}}-\overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}]^{3-}$ $\quad $ $\quad \overset{\cdot\cdot}{\underset{\cdot\cdot}{O}}$	12.) Cl ₂ <u>14</u>	$:\overset{\cdot\cdot}{Cl}-\overset{\cdot\cdot}{Cl}:$

(over)

13.) H_2SO_3 [26]	$\begin{array}{c} \text{:}\ddot{\text{O}}\text{-}\ddot{\text{S}}\text{-}\ddot{\text{O}}\text{:} \\ \quad \quad \\ \text{H} \quad \text{:}\ddot{\text{O}}\text{:} \quad \text{H} \end{array}$	19.) NO_3^- [24]	$\left[\begin{array}{c} \text{:}\ddot{\text{O}}\text{-}\text{N}=\ddot{\text{O}}\text{:} \\ \\ \text{:}\ddot{\text{O}}\text{:} \end{array} \right]^-$ <p style="text-align: right;">resonance</p>
14.) CO_3^{2-} [24]	$\left[\begin{array}{c} \text{:}\ddot{\text{O}}\text{-}\text{C}=\ddot{\text{O}}\text{:} \\ \\ \text{:}\ddot{\text{O}}\text{:} \end{array} \right]^{2-}$ <p style="text-align: right;">resonance</p>	20.) CCl_2F_2 [32]	$\begin{array}{c} \text{:}\ddot{\text{Cl}}\text{:} \\ \\ \text{:}\ddot{\text{Cl}}\text{-}\text{C}\text{-}\ddot{\text{F}}\text{:} \\ \\ \text{:}\ddot{\text{F}}\text{:} \end{array}$
15.) H_2CO_3 [24]	$\begin{array}{c} \text{:}\ddot{\text{O}}\text{-}\text{C}=\ddot{\text{O}}\text{:} \\ \quad \\ \text{H} \quad \text{:}\ddot{\text{O}}\text{-}\text{H} \end{array}$	21.) CO [10]	$\text{:}\text{C}\equiv\text{O}\text{:}$
16.) C_2H_6 [14]	$\begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H}-\text{C}-\text{C}-\text{H} \\ \quad \\ \text{H} \quad \text{H} \end{array}$	22.) H_3AsO_4 [32]	$\begin{array}{c} \text{:}\ddot{\text{O}}\text{:} \\ \\ \text{:}\ddot{\text{O}}\text{-As-}\ddot{\text{O}}\text{-H} \\ \quad \\ \text{H} \quad \text{:}\ddot{\text{O}}\text{-H} \end{array}$
17.) C_2H_4 [12]	$\begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{C}=\text{C} \\ \quad \\ \text{H} \quad \text{H} \end{array}$	23.) C_2H_2 [10]	$\text{H}-\text{C}\equiv\text{C}-\text{H}$
18.) BF_3 [24]	(an exception to the octet rule) $\begin{array}{c} \text{:}\ddot{\text{F}}\text{-}\text{B}\text{-}\ddot{\text{F}}\text{:} \\ \\ \text{:}\ddot{\text{F}}\text{:} \end{array}$	24.) SCl_6 [48]	(an exception to the octet rule) $\begin{array}{c} \text{:}\ddot{\text{Cl}}\text{:} \\ \\ \text{:}\ddot{\text{Cl}}\text{-}\text{S}\text{-}\ddot{\text{Cl}}\text{:} \\ \quad \\ \text{:}\ddot{\text{Cl}}\text{:} \quad \text{:}\ddot{\text{Cl}}\text{:} \end{array}$