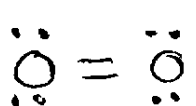
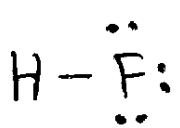
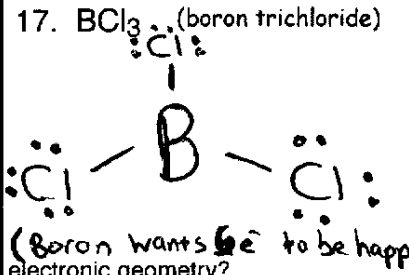
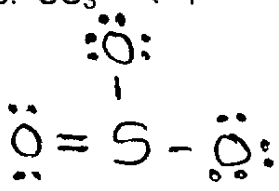
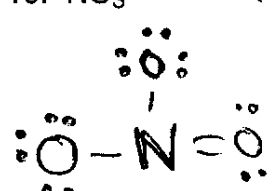
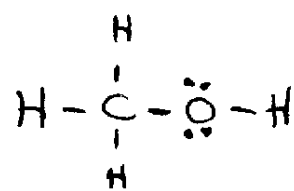


WS 3.9 Review

The following random compounds need either names or formulas. Help them discover their identity!

- Cs_3P cesium phosphide
- SiCl_4 silicon tetrachloride
- platinum (IV) iodate $\text{Pt}(\text{IO}_3)_4$
- calcium nitrite $\text{Ca}(\text{NO}_2)_2$
- stannous chloride SnCl_2
- HBrO_3 bromic acid
- sulfur trioxide SO_3
- $\text{Fe}(\text{NO}_3)_2$ iron (II) nitrate
- $(\text{NH}_4)_4\text{C}$ ammonium carbide
- hydrochloric acid HCl
- mercury (II) oxalate HgC_2O_4
- CoCO_3 cobalt (II) carbonate
- CO carbon monoxide
- How many electrons were transferred to make AlCl_3 ? 3

Write the Lewis dot structures, geometry, and polarity for the following:

<p>15. O_2 (oxygen gas)</p>  <p>electronic geometry? trigonal planar molecular geometry? linear polar? <u>N</u></p>	<p>16. HF (hydrofluoric acid)</p>  <p>electronic geometry? tetrahedral molecular geometry? linear polar? <u>Y</u></p>	<p>17. BCl_3 (boron trichloride)</p>  <p>electronic geometry? trigonal planar molecular geometry? trigonal planar polar? <u>N</u></p>
<p>18. SO_3 (sulphur trioxide)</p>  <p>electronic geometry? trigonal planar molecular geometry? trigonal planar polar? <u>N</u></p>	<p>19. NO_3^{1-} (nitrate ion)</p>  <p>electronic geometry? trigonal planar molecular geometry? trigonal planar polar? <u>N</u></p>	<p>20. CH_4O (methyl alcohol)</p>  <p>electronic geometry? tetrahedral molecular geometry? tetrahedral polar? <u>Y</u></p>

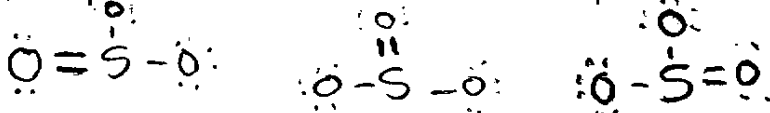
Classify the bond type as non polar, polar, or ionic by calculating ΔEN :

21. KBr $\Delta\text{EN} = \frac{2.96}{-0.82} = \underline{2.14}$ bond type = ionic

22. CO $\Delta\text{EN} = \frac{3.44}{-2.55} = \underline{.89}$ bond type = polar covalent

23. SiI_2 $\Delta\text{EN} = \frac{2.66}{-1.90} = \underline{.76}$ bond type = polar covalent

24. Draw all possible resonance structures for sulphur trioxide:



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