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1. Write the formulas for the following compounds.

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|-------------------------|-----------------------------------|-----------------------------|-----------------------------------|
| a. carbon dioxide | <u>CO₂</u> | k. diphosphorus trisulphide | <u>P₂S₃</u> |
| b. silicon dioxide | <u>SiO₂</u> | l. dinitrogen monoxide | <u>N₂O</u> |
| c. water | <u>H₂O</u> | m. dichlorine monoxide | <u>Cl₂O</u> |
| d. carbon disulphide | <u>CS₂</u> | n. bromine gas | <u>Br₂(g)</u> |
| e. sulphur trioxide | <u>SO₃</u> | o. carbon monoxide | <u>CO</u> |
| f. carbon tetrachloride | <u>CCl₄</u> | p. xenon tetrafluoride | <u>XeF₄</u> |
| g. sulphur dioxide | <u>SO₂</u> | q. neon gas | <u>Ne(g)</u> |
| h. dinitrogen tetroxide | <u>N₂O₄</u> | r. silicon tetrahydride | <u>SiH₄</u> |
| i. nitrogen monoxide | <u>NO</u> | s. iodine heptachloride | <u>ICl₇</u> |
| j. arsenic tribromide | <u>AsBr₃</u> | t. krypton difluoride | <u>KrF₂</u> |

2. Write the names for the following compounds.

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|----------------------------------|---|----------------------------------|----------------------------------|
| a. CF ₄ | <u>carbon tetrafluoride</u> | k. NF ₃ | <u>nitrogen trifluoride</u> |
| b. NH ₃ | <u>ammonia</u> / <u>nitrogen trihydride</u> | l. P ₂ S ₅ | <u>diphosphorus pentasulfide</u> |
| c. PBr ₃ | <u>phosphorus tribromide</u> | m. PF ₅ | <u>phosphorus pentafluoride</u> |
| d. F ₂ gas | <u>fluorine gas</u> | n. ICl | <u>iodine monochloride</u> |
| e. CS ₂ | <u>carbon disulfide</u> | o. SeCl ₂ | <u>selenium dichloride</u> |
| f. CO | <u>carbon monoxide</u> | p. Cl ₂ O | <u>dichlorine monoxide</u> |
| g. SiC | <u>silicon monocarbide</u> | q. AsBr ₃ | <u>arsenic tribromide</u> |
| h. N ₂ O ₄ | <u>dinitrogen tetroxide</u> | r. H ₂ S | <u>dihydrogen monosulfide</u> |
| i. P ₂ O ₅ | <u>diphosphorus pentoxide</u> | s. B ₂ H ₆ | <u>diboron hexahydride</u> |
| j. SF ₄ | <u>sulfur tetrafluoride</u> | t. TeCl ₂ | <u>tellurium dichloride</u> |

A. Based on the properties of the following materials, determine whether they are made of primarily ionic compounds or covalent compounds:

- a) telephone receiver: ionic
- b) concrete: ionic
- c) gasoline: covalent
- d) candy corn: covalent

B. Write the formulas for the following covalent compounds:

- 1) antimony tribromide Sb Br₃
- 2) hexaboron silicide B₆ S
- 3) chlorine dioxide Cl O₂
- 4) ^{mono}hydrogen iodide HI
- 5) iodine pentafluoride I F₅
- 6) dinitrogen trioxide N₂ O₃
- 7) ammonia NH₃
- 8) phosphorus triiodide P I₃

C. Write the names for the following covalent compounds:

- 9) P₄S₅ tetraphosphorus pentasulfide
- 10) O₂ oxygen gas O₂(g)
- 11) SeF₆ selenium hexafluoride
- 12) Si₂Br₆ disilicon hexabromide
- 13) SCl₄ sulfur tetrachloride
- 14) CH₄ methane
- 15) B₂Si diboron monosulfide silicide
- 16) NF₃ nitrogen trifluoride

diboron silicide