**Quiz 5A**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. What is the goal of this week’s experiment (1 point)?

The goal of the Molecular Models experiment is to learn how to draw molecules and about their shapes.

1. Complete the following table (3 points):

|  |  |  |
| --- | --- | --- |
|  | Formula | Compound Name |
|  | P4S6 | tetrahosphorus hexasulfide |
|  | NO | Nitrogen monoxide |
|  | KrF2 | Krypton difluoride |

1. Complete the following table (12 points):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Name | Cation | Anion | Formula |
|  | Zinc carbonate | Zn2+ | CO32- | ZnCO3 |
|  | Potassium iodite | K+ | IO2- | KIO2 |
|  | Iron(II) phosphate  Ferrous phosphate | Fe2+ | PO43- | Fe3(PO4)2 |
|  | Chromium(VI) bromide | Cr6+ | Br- | CrBr6 |

1. Are the following statements about methane true or false (4 points)? 

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  | The formula for methane is CH4. | True |
|  | Methane has a tetrahedral molecular geometry. | False |
|  | Methane is a polar molecule. | False |
|  | Methane has 4 bonding pairs on the central atom. | True |