

### ANSWERS: Formula writing and nomenclature of inorganic compounds

1. Determine the oxidation number of S in each of the following compounds:

- |                                      |            |
|--------------------------------------|------------|
| a) $\text{Na}_2\text{S}_2\text{O}_3$ | ans. a) +2 |
| b) $\text{H}_2\text{SO}_3$           | b) +4      |
| c) $\text{SO}_2$                     | c) +4      |
| d) $\text{K}_2\text{S}_2\text{O}_4$  | d) +3      |
| e) $\text{Al}_2\text{S}_3$           | e) -2      |
| f) $\text{BaS}_2\text{O}_8$          | f) +7      |

2. Name the following compounds.

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|--|--|
| a) $\text{PbI}_2$                                | ans. a) lead(II) iodide or lead iodide |
| b) $\text{FeSO}_4$                               | b) iron(II) sulfate                    |
| c) $\text{Ag}_2\text{CO}_3$                      | c) silver carbonate                    |
| d) $\text{NaCN}$                                 | d) sodium cyanide                      |
| e) $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$ | e) calcium acetate                     |
| f) $\text{Cu}(\text{NO}_3)_2$                    | f) copper(II) nitrate                  |
| g) $\text{K}_2\text{C}_2\text{O}_4$              | g) potassium oxalate                   |
| h) $\text{HgCl}$                                 | h) mercury(I) chloride                 |

3. Write formulas for the following compounds.

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|----------------------------|-----------------------------------|
| a) ammonium sulfide        | ans. a) $(\text{NH}_4)_2\text{S}$ |
| b) magnesium phosphate     | b) $\text{Mg}_3(\text{PO}_4)_2$   |
| c) mercury(II) thiocyanate | c) $\text{Hg}(\text{CNS})_2$      |
| d) sodium iodate           | d) $\text{NaIO}_3$                |
| e) chromium(III) chloride  | e) $\text{CrCl}_3$                |
| f) potassium permanganate  | f) $\text{KMnO}_4$                |
| g) zinc bromide            | g) $\text{ZnBr}_2$                |
| h) cobalt(II) perchlorate  | h) $\text{Co}(\text{ClO}_4)_2$    |