P 4.6 - Nomenclature

MARCH MADNESS - Sweet 16 Ionic Compound Tourney

First Round

sodium acetate $NaC_2H_3O_2$ (8 atoms)

potassium thiocyanate KSCN (4 atoms)

potassium carbonate K_2CO_3 (6 atoms)

zinc chloride $ZnCl_2$ (3 atoms)

ammonium sulfate $(NH_4)_2SO_4$ (15 atoms)

potassium permanganate $KMnO_4$ (6 atoms)

calcium hypochlorite $Ca(ClO)_2$ (5 atoms)

potassium ferricyanide $K_3Fe(CN)_6$ (16 atoms)

mercury(I) sulfate Hg_2SO_4 (7 atoms)

titanium(II) oxide TiO (2 atoms)

sodium chlorate $NaClO_3$ (5 atoms)

iron(III) sulfate $Fe_2(SO_4)_3$ (17 atoms)

copper(I) chloride CuCl (2 atoms)

sodium chromate Na_2CrO_4 (7 atoms)

calcium hydroxide $Ca(OH)_2$ (5 atoms)

potassium phosphate K_3PO_4 (8 atoms)

Quarter Finals

sodium acetate $NaC_2H_3O_2$ (2 ions)

potassium carbonate K_2CO_3 (3 ions)

ammonium sulfate $(NH_4)_2SO_4$ (3 ions)

potassium ferricyanide $K_3Fe(CN)_6$ (4 ions)

mercury(I) sulfate Hg_2SO_4 (3 ions)

iron(III) sulfate $Fe_2(SO_4)_3$ (5 ions)

sodium chromate Na_2CrO_4 (3 ions)

potassium phosphate K_3PO_4 (4 ions)

Semi Finals

potassium carbonate K_2CO_3 (2-)

potassium ferricyanide $K_3Fe(CN)_6$ (3-)

Rules: Write the apprpriate formula for the name.

1. First Round - The formula with the most number of "atoms" wins.

2. Quarter Finals: Greater number of ions in the formula unit wins.

3. Semis: Total higher charge on all of the anios wins.

4. Finals: The larger molar mass wins.

iron(III) sulfate $Fe_2(SO_4)_3$ (3 x 2- = 6-)

potassium phosphate K_3PO_4 (3-)

Finals

potassium ferricyanide $K_4Fe(CN)_6$ (368.25)

iron(III) sulfate $Fe_2(SO_4)_3$ (399.9)

Winner

iron(III) sulfate $Fe_2(SO_4)_3$