

## AP CHEMISTRY SUMMER WORK

The student should review the concepts learned during regular high school chemistry since these will be assumed as we begin our excursion into AP Chemistry. The student should do the following problems from the textbook and should have memorized, the monoatomic ions and polyatomic ions that are attached to this bulletin. The textbook is Chemistry: The Central Science (13<sup>th</sup> edition) by Brown, LeMay, and Bernsten. ISBN 13:978-0321910417.

### Problems to be completed: Show all work and circle answers.

Pp 34 – 39 #13,19,22,24,30,32,41,42,47,56,76,83

Pp 73 – 79

#19,26,27,36,39,45,49,53,58,59,61,66,71,74,92,96,100,103

Pp 112 – 120 # 1-8,

19,26,27,36,39,45,49,53,63,67,71,72,77,79,83,85

### Ions to be memorized

Silver	Ag+1
Cadmium	Cd+2
Zinc	Zn+2
Hydride	H-1
Acetate	C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> -1
Chlorate	ClO <sub>3</sub> -1
Chlorite	ClO <sub>2</sub> -1
Cyanide	CN -1
Hydroxide	OH -1
Hypochlorite	ClO -1
Iodate	IO <sub>3</sub> -1
Nitrate	NO <sub>3</sub> -1
Nitrite	NO <sub>2</sub> -1
Perchlorate	ClO <sub>4</sub> -1
Permanganate	MnO <sub>4</sub> -1
Carbonate	CO <sub>3</sub> -2
Chromate	CrO <sub>4</sub> -2

<b>Dichromate</b>	<b>Cr<sub>2</sub>O<sub>7</sub> -2</b>
<b>Oxalate</b>	<b>C<sub>2</sub>O<sub>4</sub> -2</b>
<b>Peroxide</b>	<b>O<sub>2</sub> -2</b>
<b>Silicate</b>	<b>SiO<sub>3</sub> -2</b>
<b>Sulfate</b>	<b>SO<sub>4</sub> -2</b>
<b>Dihydrogen phosphate</b>	<b>H<sub>2</sub>PO<sub>4</sub> -1</b>
<b>Hydrogen carbonate (bicarbonate)</b>	<b>HCO<sub>3</sub> -1</b>
<b>Hydrogen sulfite</b>	<b>HSO<sub>3</sub> -1</b>
<b>Thiocyanate</b>	<b>SCN -1</b>
<b>Hydrogen phosphate</b>	<b>HPO<sub>4</sub> -2</b>
<b>Ammonium</b>	<b>NH<sub>4</sub> +1</b>
<b>Arsenate</b>	<b>AsO<sub>4</sub> +3</b>
<b>Phosphate</b>	<b>PO<sub>4</sub> -3</b>
<b>Sulfite</b>	<b>SO<sub>3</sub> -2</b>
<b>Tartrate</b>	<b>C<sub>4</sub>H<sub>4</sub>O<sub>6</sub> -2</b>
<b>Tetraborate</b>	<b>B<sub>4</sub>O<sub>7</sub> -2</b>
<b>Thiosulfate</b>	<b>S<sub>2</sub>O<sub>3</sub> -2</b>
<b>Hydrogen sulfite (bisulfite)</b>	<b>HSO<sub>3</sub> -1</b>