

- 1) Review problems
- 2) Review oxidation state rules
- 3) Go over log and exponent rules
- 4) Half reaction example
- 5) Water Chemistry

## 1) REVIEW PROBLEMS

## 2) OXIDATION STATE RULES

H almost always has a charge of +1

Except: H<sub>2</sub>

O almost always has a charge of -2

Except: O<sub>2</sub>

H<sub>2</sub>O<sub>2</sub> -1 (see rule 1)

So, if a compound has no overall charge then all charges must cancel.

HCl

H<sub>2</sub>SO<sub>4</sub>

HNO<sub>3</sub>

**If a compound has a charge the overall charge must be the end result.**



### 3a) LOGARITHM RULES

$$\log 10^a = a$$

$$\log (b * c) = \log b + \log c$$

$$\log (b / c) = \log b - \log c$$

Solve (with and without calc.)

$$\log 10$$

$$\log 10^{-6}$$

$$\log 10^{50}$$

$$-\log 100$$

$$\log x = 2$$

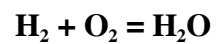
### 3b) EXPONENT RULES

$$a^b * a^c = a^{b+c}$$

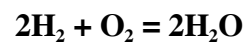
$$a^b / a^c = a^{b-c}$$

$$(a^b)^c = a^{b*c}$$

#### 4) HALF REACTION EXAMPLE



Balanced (easy one)



Oxidation states?

How many electrons are transferred?

