

# Stoichiometry Continued

given g?  
need to go to mol?

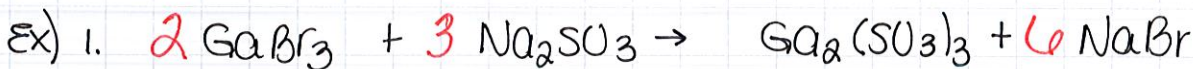
mole ratio - comes from  
the balanced equation

need to go from  
moles to g?

$$\frac{1 \text{ mol}}{\text{Molar Mass}}$$

$$\frac{\text{mol unknown}}{\text{mol given}}$$

$$\frac{\text{Molar Mass}}{1 \text{ mol}}$$



How many moles of gallium sulfite are produced by .7500 moles of gallium bromide with excess sodium sulfite?  
GIVEN

$$\frac{.7500 \text{ mol GaBr}_3}{1 \text{ mol GaBr}_3} \times \frac{1 \text{ mol Ga}_2(\text{SO}_3)_3}{2 \text{ mol GaBr}_3} = .3750 \text{ mol Ga}_2(\text{SO}_3)_3$$

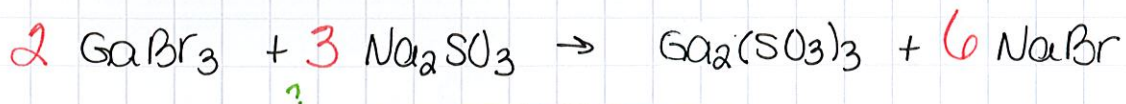
2. How many moles of sodium bromide form when 13.0 g of sodium sulfite reacts with excess gallium bromide?  
GIVEN

$$\frac{13.0 \text{ g Na}_2\text{SO}_3}{126.05 \text{ g Na}_2\text{SO}_3} \times \frac{1 \text{ mol Na}_2\text{SO}_3}{3 \text{ mol Na}_2\text{SO}_3} \times \frac{2 \text{ mol NaBr}}{1 \text{ mol Na}_2\text{SO}_3} = .206 \text{ mol NaBr}$$

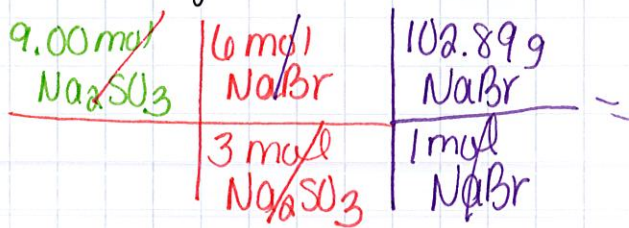
Na:  $2 \times 22.99 \text{ g} = 45.98 \text{ g}$   
S:  $1 \times 32.07 \text{ g} = 32.07 \text{ g}$   
O:  $3 \times 16.00 \text{ g} = 48.00 \text{ g}$   
+  $126.05 \text{ g}$

3. How many moles of gallium sulfite are produced along with 33.00 g of sodium bromide?  
GIVEN

$$\frac{33.00 \text{ g NaBr}}{102.89 \text{ g NaBr}} \times \frac{1 \text{ mol NaBr}}{6 \text{ mol NaBr}} \times \frac{1 \text{ mol Ga}_2(\text{SO}_3)_3}{1 \text{ mol Ga}_2(\text{SO}_3)_3} = .05346 \text{ mol Ga}_2(\text{SO}_3)_3$$

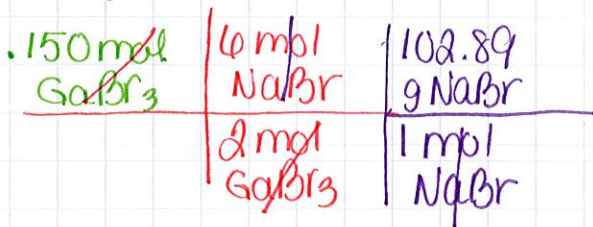


4. What mass of sodium bromide is produced by reacting 9.00 moles of sodium sulfite with excess gallium bromide? GIVEN



1850 g NaBr

5. What mass of sodium bromide is formed by reacting .150 moles of gallium bromide with excess sodium sulfite? GIVEN



46.3 g NaBr

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moles to g?

$$\frac{1 \text{ mol}}{\text{Molar Mass}}$$

$$\frac{\text{mol unknown}}{\text{mol given}}$$

$$\frac{\text{Molar Mass}}{1 \text{ mol}}$$

If your  
given is:

mol

g

mol

If your  
unknown is:

mol

mol

g

Do these  
steps:

red

blue + red

red + purple