



Fold

**2 POINT QUESTION**

Using the balanced equation above,  
convert 52 grams of  $\text{FeCl}_3$  to moles  
of  $\text{Fe}_2\text{O}_3$

$$52 \text{ g } \text{FeCl}_3 \left( \frac{1 \text{ mol } \text{FeCl}_3}{162 \text{ g } \text{FeCl}_3} \right) \left( \frac{1 \text{ mol } \text{Fe}_2\text{O}_3}{2 \text{ mol } \text{FeCl}_3} \right)$$

**ANSWER:** 0.16 moles of  $\text{Fe}_2\text{O}_3$

**2 POINT QUESTION**

Using the balanced equation above,  
convert 43 grams of  $\text{FeCl}_3$  to moles  
of  $\text{MgCl}_2$

$$43 \text{ g } \text{FeCl}_3 \left( \frac{1 \text{ mol } \text{FeCl}_3}{162 \text{ g } \text{FeCl}_3} \right) \left( \frac{3 \text{ moles } \text{MgCl}_2}{2 \text{ moles } \text{FeCl}_3} \right)$$

**ANSWER:** 0.40 moles of  $\text{MgCl}_2$

**2 POINT QUESTION**

Using the balanced equation above,  
convert 14 grams of  $\text{MgO}$  to moles of  
 $\text{Fe}_2\text{O}_3$

$$14 \text{ grams } \text{MgO} \left( \frac{1 \text{ mole } \text{MgO}}{40.3 \text{ g } \text{MgO}} \right) \left( \frac{1 \text{ mole } \text{Fe}_2\text{O}_3}{3 \text{ moles } \text{MgO}} \right)$$

**ANSWER:** 0.12 moles of  $\text{Fe}_2\text{O}_3$

**2 POINT QUESTION**

Using the balanced equation above,  
convert 72 grams of  $\text{MgO}$  to moles of  
 $\text{MgCl}_2$

$$72 \text{ grams } \text{MgO} \left( \frac{1 \text{ mole } \text{MgO}}{40.3 \text{ g } \text{MgO}} \right) \left( \frac{3 \text{ moles } \text{MgCl}_2}{3 \text{ moles } \text{MgO}} \right)$$

**ANSWER:** 1.8 moles of  $\text{MgCl}_2$



Fold at the - - - line  
Cut at the —— lines

**2 POINT QUESTION**



Using the balanced equation above,  
convert 2 moles MgO to moles FeCl<sub>3</sub>

$$2 \text{ moles MgO} \left( \frac{2 \text{ mole FeCl}_3}{3 \text{ moles MgO}} \right)$$

**ANSWER: 1.3 moles of FeCl<sub>3</sub>**

**2 POINT QUESTION**



Using the balanced equation above,  
convert 6 moles MgO to moles of  
MgCl<sub>2</sub>

$$6 \text{ moles MgO} \left( \frac{3 \text{ moles MgCl}_2}{3 \text{ moles MgO}} \right)$$

**ANSWER: 6 moles of MgCl<sub>2</sub>**

**2 POINT QUESTION**



Using the balanced equation above,  
convert 1.8 moles Fe<sub>2</sub>O<sub>3</sub> to moles MgO

$$1.8 \text{ moles Fe}_2\text{O}_3 \left( \frac{3 \text{ mole MgO}}{1 \text{ mole Fe}_2\text{O}_3} \right)$$

**ANSWER: 5.4 moles of MgO**

**2 POINT QUESTION**



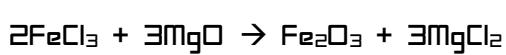
Using the balanced equation above,  
convert 5.4 moles FeCl<sub>3</sub> to moles of  
Fe<sub>2</sub>O<sub>3</sub>

$$5.4 \text{ moles FeCl}_3 \left( \frac{1 \text{ mole Fe}_2\text{O}_3}{2 \text{ moles FeCl}_3} \right)$$

**ANSWER: 2.7 moles of Fe<sub>2</sub>O<sub>3</sub>**

Fold at the - - - line  
Cut at the — — lines

**2 POINT QUESTION**



Using the balanced equation above,  
convert 0.54 moles  $\text{FeCl}_3$  to moles of  
 $\text{MgCl}_2$

$$0.54 \text{ moles } \text{FeCl}_3 \left( \frac{3 \text{ mole } \text{MgCl}_2}{2 \text{ moles } \text{FeCl}_3} \right)$$

**ANSWER:** 0.81 moles of  $\text{MgCl}_2$

**2 POINT QUESTION**



Using the balanced equation above,  
convert 3.3 moles of  $\text{Fe}_2\text{O}_3$  to moles  
of  $\text{MgCl}_2$

$$3.3 \text{ moles } \text{Fe}_2\text{O}_3 \left( \frac{3 \text{ mole } \text{MgCl}_2}{1 \text{ mole } \text{Fe}_2\text{O}_3} \right)$$

**ANSWER:** 9.9 moles of  $\text{MgCl}_2$

**2 POINT QUESTION**

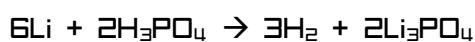


Using the balanced equation above,  
convert 67 grams of Li to moles of  
 $\text{H}_2$

$$67 \text{ grams Li} \left( \frac{1 \text{ mole Li}}{6.941 \text{ g Li}} \right) \left( \frac{3 \text{ mole H}_2}{6 \text{ moles Li}} \right)$$

**ANSWER:** 4.8 moles of  $\text{H}_2$

**2 POINT QUESTION**



Using the balanced equation above,  
convert 23 grams of Li to moles of  
 $\text{Li}_3\text{PO}_4$

$$23 \text{ grams Li} \left( \frac{1 \text{ mole Li}}{6.941 \text{ g Li}} \right) \left( \frac{2 \text{ moles Li}_3\text{PO}_4}{6 \text{ moles Li}} \right)$$

**ANSWER:** 1.1 moles of  $\text{Li}_3\text{PO}_4$

Fold at the - - - line  
Cut at the — — lines

**2 POINT QUESTION**



Using the balanced equation above,  
convert 51 grams of  $\text{H}_3\text{PO}_4$  to moles  
of  $\text{Li}_3\text{PO}_4$

$$51 \text{ g } \text{H}_3\text{PO}_4 \left( \frac{1 \text{ mol } \text{H}_3\text{PO}_4}{98 \text{ g } \text{H}_3\text{PO}_4} \right) \left( \frac{2 \text{ mol } \text{Li}_3\text{PO}_4}{2 \text{ mol } \text{H}_3\text{PO}_4} \right)$$

**ANSWER:** 0.52 moles of  $\text{Li}_3\text{PO}_4$

**2 POINT QUESTION**



Using the balanced equation above,  
convert 42 grams of  $\text{H}_3\text{PO}_4$  to moles  
of  $\text{H}_2$

$$42 \text{ g } \text{H}_3\text{PO}_4 \left( \frac{1 \text{ mol } \text{H}_3\text{PO}_4}{98 \text{ g } \text{H}_3\text{PO}_4} \right) \left( \frac{3 \text{ mol } \text{H}_2}{2 \text{ mol } \text{H}_3\text{PO}_4} \right)$$

**ANSWER:** 0.64 moles of  $\text{H}_2$

**2 POINT QUESTION**



Using the balanced equation above,  
convert 5.1 moles Li to moles  $\text{H}_3\text{PO}_4$

$$5.1 \text{ moles Li} \left( \frac{2 \text{ mole } \text{H}_3\text{PO}_4}{6 \text{ moles Li}} \right)$$

**ANSWER:** 1.7 moles of  $\text{H}_3\text{PO}_4$

**2 POINT QUESTION**



Using the balanced equation above,  
convert 4.6 moles  $\text{Li}_3\text{PO}_4$  to moles of  
Li

$$4.6 \text{ moles } \text{Li}_3\text{PO}_4 \left( \frac{6 \text{ mole Li}}{2 \text{ moles } \text{Li}_3\text{PO}_4} \right)$$

**ANSWER:** 14 moles of Li

Fold at the - - - line  
Cut at the —— lines

**2 POINT QUESTION**



Using the balanced equation above,  
convert 0.21 moles of H<sub>2</sub> to moles of  
H<sub>3</sub>PO<sub>4</sub>

$$0.21 \text{ moles H}_2 \left( \frac{2 \text{ mole H}_3\text{PO}_4}{3 \text{ moles H}_2} \right)$$

**ANSWER: 0.14 moles of H<sub>3</sub>PO<sub>4</sub>**

**2 POINT QUESTION**

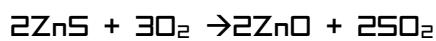


Using the balanced equation above,  
convert 0.95 moles of H<sub>3</sub>PO<sub>4</sub> to moles  
of Li<sub>3</sub>PO<sub>4</sub>

$$0.95 \text{ moles H}_3\text{PO}_4 \left( \frac{2 \text{ mole Li}_3\text{PO}_4}{2 \text{ moles H}_3\text{PO}_4} \right)$$

**ANSWER: 0.95 moles of Li<sub>3</sub>PO<sub>4</sub>**

**2 POINT QUESTION**

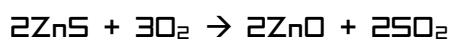


Using the balanced equation above,  
convert 22 grams of ZnS to moles of  
ZnO

$$22 \text{ g ZnS} \left( \frac{1 \text{ mol ZnS}}{97.44 \text{ g ZnS}} \right) \left( \frac{2 \text{ mol ZnO}}{2 \text{ mol ZnS}} \right)$$

**ANSWER: 0.23 moles of ZnO**

**2 POINT QUESTION**



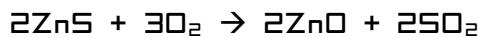
Using the balanced equation above,  
convert 41 grams of O<sub>2</sub> to moles of  
ZnO

$$41 \text{ g O}_2 \left( \frac{1 \text{ mole O}_2}{32 \text{ g O}_2} \right) \left( \frac{2 \text{ moles ZnO}}{3 \text{ moles O}_2} \right)$$

**ANSWER: 0.85 moles of ZnO**

Fold at the --- line  
Cut at the —— lines

**2 POINT QUESTION**



Using the balanced equation above,  
convert 79 grams of ZnS to moles of  
 $\text{SO}_2$

$$79 \text{ g ZnS} \left( \frac{1 \text{ mol ZnS}}{97.44 \text{ g ZnS}} \right) \left( \frac{2 \text{ mol SO}_2}{2 \text{ mol ZnS}} \right)$$

**ANSWER: 0.81 moles of  $\text{SO}_2$**

**2 POINT QUESTION**

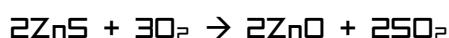


Using the balanced equation above,  
convert 56 grams of  $\text{O}_2$  to moles of  
 $\text{SO}_2$

$$56 \text{ g O}_2 \left( \frac{1 \text{ mol O}_2}{32 \text{ g O}_2} \right) \left( \frac{2 \text{ mol SO}_2}{3 \text{ mol O}_2} \right)$$

**ANSWER: 1.2 moles of  $\text{SO}_2$**

**2 POINT QUESTION**

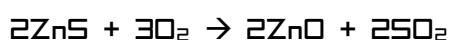


Using the balanced equation above,  
convert 7.2 moles of ZnS to moles of  
 $\text{ZnO}$

$$7.2 \text{ mol ZnS} \left( \frac{2 \text{ mol ZnO}}{2 \text{ mol ZnS}} \right)$$

**ANSWER: 7.2 moles of  $\text{ZnO}$**

**2 POINT QUESTION**



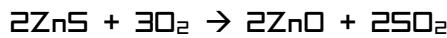
Using the balanced equation above,  
convert 0.13 moles of  $\text{SO}_2$  to moles of  
 $\text{ZnS}$

$$0.13 \text{ mol SO}_2 \left( \frac{2 \text{ mol ZnS}}{2 \text{ mol SO}_2} \right)$$

**ANSWER: 0.13 moles of  $\text{ZnS}$**

Fold at the - - - line  
Cut at the —— lines

**2 POINT QUESTION**

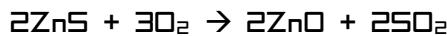


Using the balanced equation above,  
convert 0.49 moles of  $\text{O}_2$  to  $\text{ZnS}$

$$0.49 \text{ mol } \text{O}_2 \left( \frac{2 \text{ mol ZnS}}{3 \text{ mol O}_2} \right)$$

**ANSWER: 0.33 moles of ZnS**

**2 POINT QUESTION**



Using the balanced equation above,  
convert 3.8 moles of  $\text{ZnO}$  to moles of  
 $\text{SO}_2$

$$3.8 \text{ mol ZnO} \left( \frac{2 \text{ mol SO}_2}{2 \text{ mol ZnO}} \right)$$

**ANSWER: 3.8 moles of  $\text{SO}_2$**

**2 POINT QUESTION**

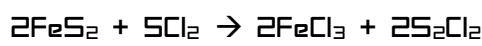


Using the balanced equation above,  
convert 12 moles of  $\text{O}_2$  to moles of  
 $\text{ZnO}$

$$12 \text{ mol O}_2 \left( \frac{2 \text{ mol ZnO}}{3 \text{ mol O}_2} \right)$$

**ANSWER: 8 moles of ZnO**

**2 POINT QUESTION**



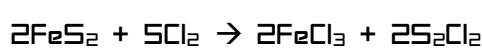
Using the balanced equation above,  
convert 62 grams of  $\text{FeS}_2$  to moles  
of  $\text{FeCl}_3$

$$62 \text{ g FeS}_2 \left( \frac{1 \text{ mol FeS}_2}{119.97 \text{ g FeS}_2} \right) \left( \frac{2 \text{ mol FeCl}_3}{2 \text{ mol FeS}_2} \right)$$

**ANSWER: 0.52 moles of  $\text{FeCl}_3$**

Fold at the - - - line  
Cut at the —— lines

**2 POINT QUESTION**

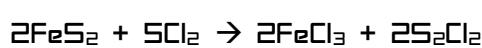


Using the balanced equation above,  
convert 51 grams of  $\text{FeS}_2$  to moles of  
 $\text{S}_2\text{Cl}_2$

$$51 \text{ g } \text{FeS}_2 \left( \frac{1 \text{ mol } \text{FeS}_2}{119.97 \text{ g } \text{FeS}_2} \right) \left( \frac{2 \text{ mol } \text{S}_2\text{Cl}_2}{2 \text{ mol } \text{FeS}_2} \right)$$

**ANSWER: 0.43 moles of  $\text{S}_2\text{Cl}_2$**

**2 POINT QUESTION**

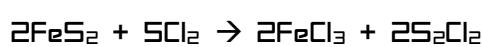


Using the balanced equation above,  
convert 81 grams of  $\text{Cl}_2$  to moles of  
 $\text{FeCl}_3$

$$81 \text{ g } \text{Cl}_2 \left( \frac{1 \text{ mol } \text{Cl}_2}{70.9 \text{ g } \text{Cl}_2} \right) \left( \frac{2 \text{ mol } \text{FeCl}_3}{5 \text{ mol } \text{Cl}_2} \right)$$

**ANSWER: 0.46 moles of  $\text{FeCl}_3$**

**2 POINT QUESTION**

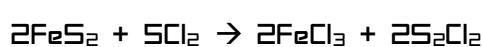


Using the balanced equation above,  
convert 78 grams of  $\text{Cl}_2$  to moles of  
 $\text{S}_2\text{Cl}_2$

$$78 \text{ g } \text{Cl}_2 \left( \frac{1 \text{ mol } \text{Cl}_2}{70.9 \text{ g } \text{Cl}_2} \right) \left( \frac{2 \text{ mol } \text{S}_2\text{Cl}_2}{5 \text{ mol } \text{Cl}_2} \right)$$

**ANSWER: 0.44 moles of  $\text{S}_2\text{Cl}_2$**

**2 POINT QUESTION**



Using the balanced equation above,  
convert 18 moles of  $\text{Cl}_2$  to moles of  
 $\text{S}_2\text{Cl}_2$

$$18 \text{ moles } \text{Cl}_2 \left( \frac{2 \text{ moles } \text{S}_2\text{Cl}_2}{5 \text{ moles } \text{Cl}_2} \right)$$

**ANSWER: 7.2 moles of  $\text{S}_2\text{Cl}_2$**