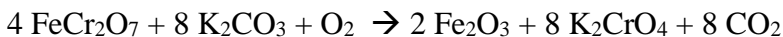


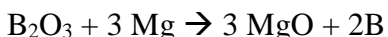
## “STOICH AND MORE STOICH” Practice (#4)

from Bauck and ChemTeam.com

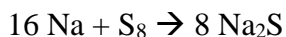
*IMPORTANT NOTE: When writing about representative particles, you must specify which one in your work and answer.*



- 1) How many L of carbon dioxide gas at STP are made from completely reacting  $5.890 \times 10^{21}$  r.p. of potassium carbonate?
- 2) How many r.p. of  $\text{Fe}_2\text{O}_3$  can be produced from using 23.00 g of oxygen gas?
- 3) 6.50 liters of  $\text{O}_2$  gas can produce how many grams of  $\text{CO}_2$  gas in the above reaction? Assume STP conditions.
- 4) 120.5 g of potassium chromate will react with how many L of oxygen at STP?
- 5) How many r.p. of  $\text{Fe}_2\text{O}_3$  will be produced when 8.6 liters of  $\text{O}_2$  reacts?



- 6) How much boron, in grams, can be obtained from 40.0 g of magnesium?
- 7)  $1.2 \times 10^{28}$  r.p. of  $\text{MgO}$  will be made from how many grams of  $\text{B}_2\text{O}_3$ ?
- 8) Calculate the number of moles of Mg needed to react completely with 2.33 mol  $\text{B}_2\text{O}_3$ .
- 9) How many r.p. of boron will be produced from reacting  $7.955 \times 10^{22}$  r.p. of  $\text{B}_2\text{O}_3$  with excess Mg?
- 10) How many particles of magnesium are needed to produce 350.00 g of magnesium oxide?



- 11) Calculate the number of moles of Na needed to react completely with 0.289 mol of  $\text{S}_8$ .
- 12) How many g of sulfur are needed to produce  $3.2 \times 10^{20}$  r.p. of sodium sulfide?
- 13) Calculate the number of g of Na needed to completely react with  $1.246 \times 10^{24}$  r.p. of sulfur.
- 14) If  $4.00 \times 10^{26}$  particles of sodium completely reacts, how many moles of sodium sulfide are produced?
- 15) Calculate the number of grams of  $\text{Na}_2\text{S}$  produced from completely reacting 0.5678 mol of  $\text{S}_8$ .