

**Some molar masses to
help speed things up
for you ☺**

$$\text{C}_3\text{H}_8 = 44.1$$

$$\text{O}_2 = 32$$

$$\text{H}_2\text{O} = 18$$

$$\text{Al}_2(\text{SO}_3)_3 = 294.2$$

$$\text{NaOH} = 40$$

$$\text{Na}_2\text{SO}_3 = 126.04$$

$$\text{Al}_2\text{O}_3 = 101.96$$

$$\text{Fe} = 55.85$$

$$\text{CuCl}_2 = 134.45$$

$$\text{NaNO}_3 = 84.995$$

$$\text{Cu}(\text{NO}_3)_2 = 187.56$$

$$\text{NaCl} = 58.443$$

$$\text{Ba}_3(\text{PO}_4)_2 = 601.92$$

$$\text{Na}_3(\text{PO}_4) = 163.94$$

$$\text{BaCl}_2 = 208.2$$

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**Some answers so you
can check your work as
you go** 😊

- 1) O₂ is LR and C₃H₈ is XS
- 2) 0.0645 mol CO₂ made
- 3) 1.55 g H₂O made
- 4) 13.87 g C₃H₈ left

- 5) Al₂(SO₃)₃ is LR and NaOH is XS
- 6) 0.06798 mol Al(OH)₃ made
- 7) 12.85 g Na₂SO₃ made
- 8) 1.842 g NaOH left

- 9) Fe is LR and Al₂O₃ is XS
- 10) 0.163 mol Al made
- 11) 0.061 mol Fe₃O₄ made
- 12) 17.1 g Al₂O₃ left

- 13)
 - A) CuCl₂ + 2NaNO₃ --> Cu(NO₃)₂ + 2NaCl
 - B) CuCl₂ is LR
 - C) 0.224 mol NaCl made
 - D) 21.01 g Cu(NO₃)₂ made
 - E) 0.011 mol NaNO₃ left
 - F) 86.3% yield

- 14)
 - A) 6NaCl + Ba₃(PO₄)₂ --> 2Na₃(PO₄) + 3BaCl₂
 - B) NaCl is LR
 - C) 935.0 g Na₃(PO₄) made and 1781.2 g BaCl₂ made
 - D) 283.52 g Ba₃(PO₄)₂ left

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