## Answers Chp 6 Review

- 5. a) 2CO +  $O_2 \Rightarrow 2CO_2$ 
  - b)  $Cl_2 + 2KBr \Rightarrow Br_2 + 2KCl$
  - c) balanced
- 6. a) Ca + 2HBr  $\Rightarrow$  CaBr<sub>2</sub> + H<sub>2</sub>
  - b)  $4AI + 3O_2 \Rightarrow 2AI_2O_3$
  - c) balanced
  - d)  $3Ba + 2H_3PO_4 \Rightarrow Ba_3(PO_4)_2 + 3H_2$
  - e)  $3CaCl_2 + Al_2(SO_4)_3 \Rightarrow 3CaSO_4 + 2AlCl_3$
  - f)  $C_3H_8 + 5O_2 \Rightarrow 3CO_2 + 4H_2O$

12. Mass of reactants = Mass of products metal + acid solution = product + gas 3.4 g + 102.5 g = 105.6 g + x (gas) 105.9 g = 105.6 g + x (gas) x (gas) = 105.9 g - 105.6 g = 0.3 g The mass of gas produced is 0.3 g.

## Part C

a) 
$$C_5H_{12}$$
 + 8  $O_2$   $\Rightarrow$  5  $CO_2$  + 6  $H_2O$  complete combustion

b) 
$$C_4H_{10} + 4O_2 \Rightarrow CO_2 + CO + 2C + 5H_2O$$
  
incomplete combustion

c) 
$${}^{2}C_{6}H_{14} + {}^{19}O_{2} \Rightarrow {}^{12}CO_{2} + {}^{14}H_{2}O$$

Part D  
solution A + solution B 
$$\Rightarrow$$
 product + gas  
103 g + 55 g  $\Rightarrow$  155 g + ?  
158g  $\Rightarrow$  155 g + ?

158 g - 155g = 3 g

The law of conservation of mass states that the mass of the reactants must equal the mass of the products in a reaction. The mass that is missing is the mass of the gas because it has evaporated into the air and cannot be measured in the beaker.