

Mole Ratio worksheet      Name \_\_\_\_\_

Write the balanced equation and solve each of the following:

1. Aluminum metal and hydrogen chloride react to form aluminum chloride and hydrogen gas.

a.                      How many moles of aluminum metal are needed to produce 3.33 moles of aluminum chloride?

b.                      How many moles of hydrogen chloride are needed to react with this number of moles of aluminum metal?

2. Aluminum bromide and sodium hydroxide react to form aluminum hydroxide and sodium bromide.

a.                      How many moles of sodium bromide can be formed from 1.55 moles of aluminum bromide?

b.                      How many moles of aluminum hydroxide may be formed from 4.65 moles of sodium hydroxide?

3. Methane gas (carbon tetrahydride) reacts with oxygen by combustion.

a.                      How many moles of methane are needed to produce  $3.5 \times 10^{-4}$  moles of carbon dioxide?

b.                      How many moles of oxygen are needed to react to form the  $3.5 \times 10^{-4}$  moles of carbon dioxide?

c.                      How many moles of atoms of oxygen would there be in your answer to question #3b?