**Sweet Stoichiometry Reactions**

Complete the following table using the candy provided. Do not unwrap or eat any candy. Complete the missing information in the table.

<table>
<thead>
<tr>
<th>Element/Compound</th>
<th>Symbol</th>
<th>Molar Mass (g/mol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butterscotch</td>
<td>Bs</td>
<td></td>
</tr>
<tr>
<td>Peppermint</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Pepperscotch</td>
<td>Bs₂P</td>
<td></td>
</tr>
<tr>
<td>Animal Cracker</td>
<td>Ac</td>
<td></td>
</tr>
<tr>
<td>Smarties</td>
<td>S₄</td>
<td></td>
</tr>
<tr>
<td>Animartie</td>
<td>Ac₃S₂</td>
<td></td>
</tr>
<tr>
<td>Skittle</td>
<td>Sk₂</td>
<td></td>
</tr>
<tr>
<td>Starburst</td>
<td>Sb</td>
<td></td>
</tr>
<tr>
<td>Skittleburst</td>
<td>Sk₂Sb₂</td>
<td></td>
</tr>
<tr>
<td>M&amp;M’s</td>
<td>Mm₅</td>
<td></td>
</tr>
<tr>
<td>Mmittle</td>
<td>MmSk₃</td>
<td></td>
</tr>
</tbody>
</table>

Use the candy in the bag to illustrate each reaction and answer the questions.

1. Butterscotch reacts with peppermint to form pepperscotch.
   a. Write the balanced equation.
   
   b. How many moles of pepperscotch can be formed by the elements in the bag?
   c. How many moles of butterscotch were used?
   d. How many moles of peppermint were used?
   e. If 18 moles of pepperscotch were produced, how many moles of butterscotch and how many moles of peppermint were used in the reaction?
   f. How many grams of pepperscotch can be produced if you start with 50.0 g of butterscotch?
   g. How many moles of pepperscotch can be made with 48.0 g of peppermints?
2. Animal cracker reacts with smarties to form animartie.
   a. Write the balanced equation.
   
   b. How many moles of animarties can be formed by the elements in the bag?
   c. How many moles of animal cracker were used?
   d. How many moles of smarties were used?
   e. How many moles of animarties can be made from 12.75 mols of animal crackers?
   f. How many grams of animarties can be made from 31.90 mols of smarties?

3. Starbursts react with skittles to form a skittleburst.
   a. Write the balanced equation.
   
   b. How many moles of skittlebursts can be formed by the elements in the bag?
   c. How many moles of starburst were used?
   d. How many moles of skittles were used?
   e. How many grams of skittlebursts can be made from 42.65 g of starburst?
   f. How many moles of skittles are needed to make 23.3 mols of skittlebursts?

4. M&M’s reacts with skittles to form a mmittle.
   a. Write the balanced equation.
   
   b. How many moles of mmittles can be formed by the elements in the bag?
   c. How many moles of M&M’s were used?
   d. How many moles of skittles were used?
   e. How many moles of mmittle can be made with 60.0 g of skittles?
   f. How many moles of M&M’s are required to make 35 mols of mmittles?