

Name _____
 Cooking Factor Label _____

This assignment uses cooking to assess factor label techniques.

Table 6.1 - Cream of Tomato - recipe produces 5 cups of soup

1 Tbs butter	Freshly ground blk pepper	28 oz pureed tomatoes
1 ½ cups chopped onion	½ tsp celery salt	1 tsp honey
2 bay leaves	½ tsp allspice	1 cup milk
½ tsp salt	2 Tbs flour	Swiss cheese

I. Use the above recipe to answer the following questions.

1. If Billy Bob (BB for short) uses 2 tsp of allspice, how much soup will he produce?

$$\frac{2 \text{ tsp allspice}}{\frac{1}{2} \text{ tsp allspice}} \times \frac{5 \text{ c. soup}}{1} = 20 \text{ c. soup}$$

2. If BB uses 1.5 cups of milk, how much soup will he produce?

$$\frac{1.5 \text{ c. milk}}{1 \text{ c. milk}} \times \frac{5 \text{ c. soup}}{1} = 7.5 \text{ c. soup}$$

3. If BB has 13 guests and want to make 14 cups of soup, how much flour must he use?

$$\frac{14 \text{ c. soup}}{5 \text{ c. soup}} \times \frac{2 \text{ Tbs flour}}{1} = 5.6 \text{ Tbs flour}$$

4. How many oz of pureed tomatoes would BB need in problem # 3?

$$\frac{14 \text{ c. soup}}{5 \text{ c. soup}} \times \frac{28 \text{ oz tomato}}{1} = 78.4 \text{ oz tomato}$$

5. If BB could only find 11 oz of pureed tomatoes, how many cups of soup can he make?

$$\frac{11 \text{ oz tomato}}{28 \text{ oz tomato}} \times \frac{5 \text{ cups}}{1} = 1.96 \text{ cups soup}$$

Table 6.2 - Volume Conversions

1 teaspoon (tsp) = 5 mL	1 Tablespoon (Tbs) = 15 mL
4 cups = 1 quart	8 fluid ounces (oz) = 1 cup
1 Tbl = 3 teaspoon	16 Tbl = 1 Cup

II. Use Table 6.1 and 6.2 to answer the following questions.

1. If Billy Bob (BB for short) uses 6 mL of celery salt, how much soup can he make (in cups)? mL → tsp

$$\frac{6 \text{ mL celery salt}}{5 \text{ mL}} \times \frac{1 \text{ tsp}}{\frac{1}{2} \text{ tsp celery salt}} \times \frac{5 \text{ c. soup}}{1} = 12 \text{ cups soup}$$

2. If BB uses 3.5 bay leaves, how much flour must he use (in mL)?

$$\frac{3.5 \text{ bay leaves}}{2 \text{ bay}} \times \frac{2 \text{ Tbs flour}}{1 \text{ Tbs}} \times \frac{15 \text{ mL}}{1} = 52.5 \text{ mL flour}$$

$$450 \text{ g} \approx 2 \text{ lbs} \approx 2 \text{ cups}$$

3. How much honey must BB use if he were to make 6 cups of soup (in cups)?

$$6 \text{ cups soup} \left| \frac{1 \text{ Tbs honey}}{5 \text{ cups soup}} \right| \frac{1 \text{ Tbs}}{3 \text{ tsp}} \left| \frac{1 \text{ cup}}{16 \text{ Tbs}} \right| = 0,025 \text{ cups}$$

Table 6.3 – Weight Conversions – note – these are not accurate measurements

1 Tbs of celery salt = 22 grams	1 Tbs of salt = 21.5 grams
1 Tbs of allspice = 27 grams	1 Tbs of flour = 19 grams
1 cup of soup = 567 grams	1 Tbs of honey = 54 grams

III. Use tables 6.1,2 and 3, to complete the following questions.

1. If I want to produce 3 Kg of soup, how much salt must I use (in grams)?

$$3 \text{ Kg soup} \left| \frac{1000 \text{ g}}{1 \text{ Kg}} \right| \frac{1 \text{ cup}}{567 \text{ g}} \left| \frac{1 \text{ tsp salt}}{5 \text{ c. soup}} \right| \frac{1 \text{ Tbs}}{3 \text{ tsp}} \left| \frac{21.5 \text{ g}}{1 \text{ Tbs salt}} \right| = 0,00758 \text{ g salt}$$

2. If I keep everything proportional and use 25 grams of allspice, how much soup will I produce (in grams)?

$$25 \text{ g allspice} \left| \frac{1 \text{ Tbs allspice}}{27 \text{ g allspice}} \right| \frac{3 \text{ tsp}}{1 \text{ Tbs}} \left| \frac{5 \text{ cups soup}}{1/2 \text{ tsp allspice}} \right| \frac{567 \text{ g}}{1 \text{ c. soup}} = 15,750 \text{ g soup}$$

3. If I use 16 grams of flour, how much soup could I produce (in grams)?

$$16 \text{ g flour} \left| \frac{1 \text{ Tbs flour}}{19 \text{ g flour}} \right| \frac{5 \text{ cups soup}}{2 \text{ Tbs flour}} \left| \frac{567 \text{ grams}}{1 \text{ cup soup}} \right| = 1199 \text{ g soup}$$

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