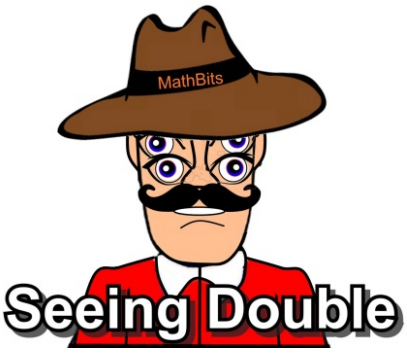
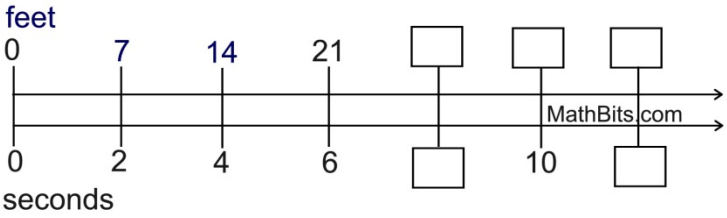


Name_____

Directions: Answer each of the following questions as directed. When finished, you will be using eight of your answers to form a new **bonus** double number line diagram. If the answers you place in the new diagram are correct, you will see a ratio emerge.

1. A remote control airplane is traveling at a constant speed. The number of feet it remains in the air for the given number of seconds is shown on the double number line diagram at the right.



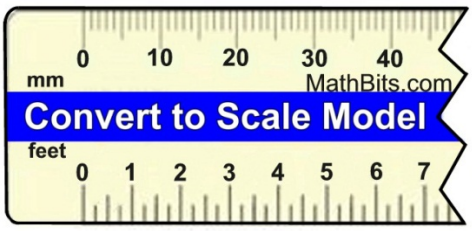
a) Fill in the boxes in the diagram.

b) If the plane flies 14 feet at this constant speed, how many seconds was the plane in the air? _____

c) If the plane was in the air for 8 seconds at this constant speed, how many feet did it fly? _____

d) Express, in simplest form, the ratio of feet to seconds as depicted in this problem. _____

2. A small display model is being made of a new snowmobile. The scale being used for the model is shown on the ruler at the right, where the number of feet in the actual snowmobile is scaled down to millimeters for the display model.



Which of the following statements is **true** in this situation?

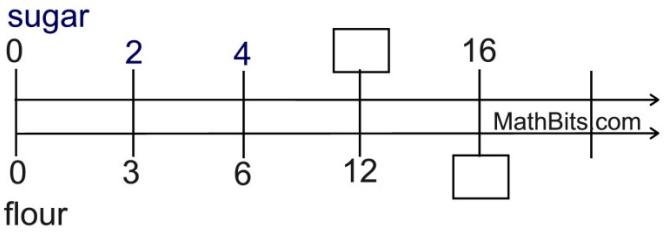
a) 3 feet will be represented by approximately 30 mm in the model.

b) 3 feet will be represented by approximately 20 mm in the model.

c) 20 mm in the model will represent approximately 5 feet in the snowmobile.

d) 30 mm in the model will represent approximately 3 feet in the snowmobile.

3. A recipe calls for cups of sugar and flour to be added in the ratio shown at the right.



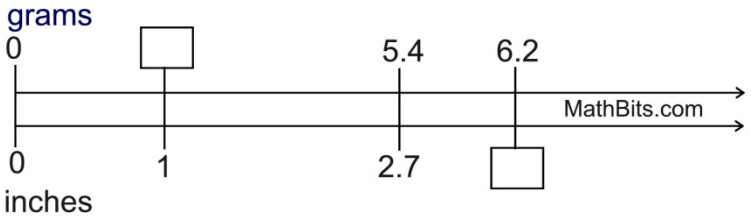
a) Fill in the boxes in the diagram.

b) Express, in simplest form, the ratio of sugar to flour in this problem. _____

c) If you use 4 cups of sugar in this recipe, how many cups of flour will be needed? _____

d) If you use 4 cups of flour in this recipe, how many cups of sugar will be needed? _____
[*Hint:* The answer will be a fraction.]

4. A piece of string 2.7 inches long weighs 5.4 grams, as depicted in the diagram at the right.

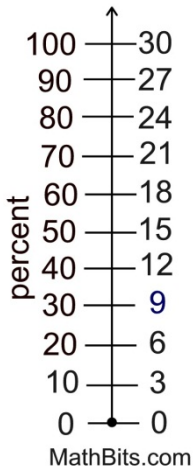


a) Fill in the boxes in the diagram.

b) Express, in simplest form, the ratio of inches to grams in this problem. _____

c) What will be the weight, in grams, of a piece of this string that is one foot long? _____

5. The diagram at the right shows the percentage breakdowns of $30.



a) Express, in simplest form, the ratio of dollars to percent. _____

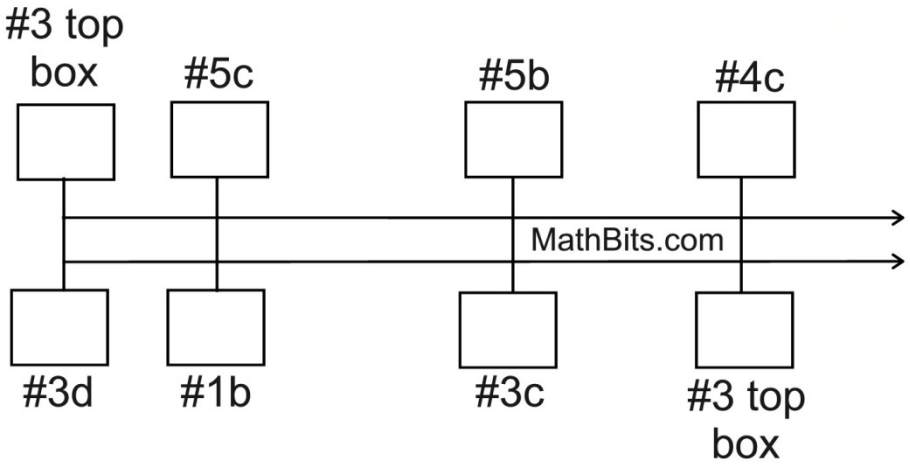
b) What is 60% of $30? _____

c) What is 40% of $30? _____

d) What percent of $30 is $6? _____

e) What is 75% of $30? _____

Bonus!! Place your answers to the indicated questions into the boxes in this double number line diagram. If your answers are correct, you will see a ratio emerging. State the ratio below the diagram.



The ratio displayed in this diagram, expressed in simplest form, is top : bottom = _____.