

## Pre 2.9b                      Fractions, Decimals & Percent Assessments

1) List at least five different representations or numbers that are equivalent to  $\frac{1}{4}$ . Some of the representations in your list should not be fractions.

2) Pick three of your answers from question one and tell when each would be used in real life. You may use examples to help you explain.

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3) Suppose you have 50 jelly beans in a jar. You estimate that 10% of them are red. How could you verify your estimate?

4) If you counted red jelly beans and got 8, what would you think about your estimate? Explain.

5) Suppose you add 25 jaw breakers to the jar of jelly beans (assume the jaw breakers are approximately the same size as the jelly beans). Make a drawing of the jar with the candy below (the drawing should in some way demonstrate the percentages).

6) Your friend says that now 50% of the candy in the jar is jaw breakers. Is he/she wrong or right? Explain your answer. If he/she is wrong, explain the error.

7) Suppose it was your principal who said, "Fractions are part of everyday life. Decimals are fractions and percents are decimals. We see and use them everywhere."

You want to impress the principal, so you keep track of every example of fractions in your life for a week. Then you write up a report which includes all of your findings and solutions to problems. As a conclusion to your report you explain the phrase "Decimals are fractions and percents are decimals."

8) There were 20 questions on the homework assignment for math class. Each problem is worth 4 points. If you missed 3 and  $\frac{1}{2}$  problems, what was your score? Be sure to show your score as a percentage also.

9) Suppose that your English teacher said, "Class, you may spend the first half of class reading your novel. Then spend half of the remaining time studying your vocabulary, and then half of the rest of class writing in your journal, and during the remaining time, you may visit quietly with your partner about your project due next Monday." If the class is 48 minutes long, how much time should be spent on each activity?

Reading a novel \_\_\_\_\_ Studying vocabulary \_\_\_\_\_

Writing in journals \_\_\_\_\_ Visiting quietly \_\_\_\_\_

If class began at 11:47, what time did the class begin journal writing? \_\_\_\_\_

10) Your science teacher said, "Please fill your beakers  $\frac{2}{3}$  full with water. If your beaker holds 480 ml of water, how many ml of water should you put into the beaker? \_\_\_\_\_

Then he said, "Add 50 ml of pure acid to your water. Then we'll test the PH levels of each beaker." What percent of your new solution is acid? \_\_\_\_\_

Will your beaker have the same percent solution as everyone else? \_\_\_\_\_ Explain why or why not.

11) In health class, your teacher gave a lesson on reading nutrition labels. He gave you the information below which was based on federal guidelines and a diet consisting of 2000 calories.

One gram of fat	Contains	You should have
Fat	9 calories	Less than 65 grams per day
Carbohydrates	4 calories	300 grams per day
Protein	4 calories	Less than 70 grams per day

a) Fill in the missing numbers in the % Daily Value column for this spaghetti sauce.

\*The % Daily Value represents the percent of the recommended amount by mass, not by calories.

b) What percent of the calories in one serving are:

Fat calories? \_\_\_\_\_

Carbohydrates? \_\_\_\_\_

c) Do you think the label on is misleading? Why or why not?

d) How nutritional do you think the spaghetti sauce is? Explain.

NUTRITIONAL FACTS		
Serving Size ½ cup (120 ml)		
Serving per container: about 9		
Amount Per Serving 2/3 cup		
Calories--150	Calories from Fat--45	
% Daily Value*		
Total Fat 5 g		
Saturated Fat 1.5 g		8 %
Cholesterol 0 mg		0 %
Sodium 670 mg		28%
Total Carbohydrate 23 g		
Dietary Fiber 3g		3 %
Sugars 14 g		no info
Protein 2 g		
Vitamin A 25 %	Vitamin C 25%	
Calcium 4 %	Iron 8 %	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.		

12) In PE class, you learned that the average person's weight is 25% skeletal and 40% muscular.

What fractions are equivalent to 25% \_\_\_\_\_ 40% \_\_\_\_\_

What do you think average means?

What fraction of a body's weight is NOT skeletal or muscular? \_\_\_\_\_  
Change that to a percent. \_\_\_\_\_

If you weigh 140 lbs and you are "average", how much does your skeleton weigh? \_\_\_\_\_  
How much do your muscles weigh? \_\_\_\_\_ (Show all of your thinking)

13) Make up a story about one of your other classes. Include a fraction or decimal or percent problem. Be creative and avoid similarities to items 1 through 11.