

You need out your MSG & Agenda

Homework: Biased/Unbiased. QUIZ FRIDAY

Opening:

-Mrs. Sangster wants to know the 7th graders favorite animal. <sup>who</sup> She decides to ask every 6th person <sup>what</sup> who walks into the 7th grade commons before homeroom. She finds that most students like dogs so she assumes that most 7th graders favorite animal is dogs.

1) What survey method did she use?

**Systematic**

2) Is this a valid conclusion?

**Valid → everyone in the pop had fair chance.**

3) It costs \$24 to fill up 12 gallons of gas. How much would it cost to fill up 23 gallons of gas?

~~$$\frac{m}{t} = \frac{24}{12} = \frac{x}{23}$$~~

$$\frac{\$24}{12} = \frac{x}{1}$$

$$\frac{12x}{12} = \frac{552}{12} = 46$$

Candy Color	Number of candies in Sample # 1	Number of candies in Sample # 2	Number of candies in Sample # 3	Number of candies in Sample # 4	Number of candies in Sample # 5	Number of candies in Sample # 6	Total Number of candies in ALL Samples	% of Each Color of candies
Red							20	$20/120 = 16$
Orange							40	$40/120 = 33$
Yellow							60	$60/120 = 50$
Green							10	$10/120 = .08$
Blue							12	$12/120 = 10$
<del>Brown</del> purple							13	$13/120 = 10$
Total Number of candies in FL Sample							120	



Handwritten calculations in blue and green ink to the right of the table. The numbers 20, 40, 60, 10, 12, and 13 are circled in green. The total number 120 is boxed in green. The calculations are:  $20/120 = 16$ ,  $40/120 = 33$ ,  $60/120 = 50$ ,  $10/120 = .08$ ,  $12/120 = 10$ , and  $13/120 = 10$ .

Answer the following questions about your sample:

3. Is your sample random? Explain your answer.

yes - valid/unbiased

4. Do you think your sample could predict the number of M&Ms in a larger bag? Why or why not?

Random sample. Unbiased = valid results  
yes - use to predict

5. Do you think that the percentages of each color of M&Ms are the same as other groups? Why or why not?

6. Using your data values, estimate the number of M&Ms for EACH color for a bag of 1000 candies. Record your data in the table below.

Color	Estimate for Number of M&Ms in a Population of 1000 M&Ms
Red	<del><math>\frac{30}{120} = \frac{x}{1000}</math></del> $\frac{120}{120} \times \frac{3000}{120}$
Orange	$\frac{12}{120} = \frac{x}{1000}$
Yellow	$\frac{33}{120} = \frac{x}{1000}$
Green	
Blue	
Brown	