

Table Number: _____

Group Name: _____

Group Members: _____

Reese's Pieces Part 1

Part 1: Making Conjectures about Samples



Reese's Pieces candies have three colors: Orange, brown, and yellow. Which color do you think has more candies (occurs more often) in a package: Orange, brown or yellow?

1. Guess the proportion of each color in a bag:

Color	Orange	Brown	Yellow
Predicted Proportion			

2. If each student in the class takes a sample of 25 Reese's Pieces candies, would you expect every student to have the same number of orange candies in their sample? Explain.
3. Make a conjecture: Pretend that 10 students each took samples of 25 Reese's Pieces candies. Write down the number of orange candies you might expect for these 10 samples:

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These numbers show the **variability** you would expect to see in the number of orange candies in 10 **samples** of 25 candies.

You will be given a cup that is a **random sample** of Reese's Pieces candies. Count out 25 candies from this cup without paying attention to color. In fact, try to **IGNORE** the colors as you do this.

4. Now, count the colors for your sample and fill in the chart below:

	Orange	Yellow	Brown	Total
Number of candies				
Proportion of candies (Divide each number by 25)				

Record both the number and proportion of orange candies on the board.

Repeat the above four more times. For each trial, record the number and proportion of **orange** Reese's Pieces.

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Number of orange candies					
Proportion of orange candies (Divide each number by 25)					

5. Now that you have taken samples of candies and see the proportion of orange candies, make a second conjecture: *If you took a sample of 25 Reese's Pieces candies and found that you had only 5 orange candies, would you be surprised?* Do you think that 5 is an unusual value?

6. Record the proportions of orange candies in your samples on the dotplot below. Then ask one member of your group to create a dotplot with all group member's proportions. That person is to come to the whiteboard and add your group's proportions to the whole class' dotplot.

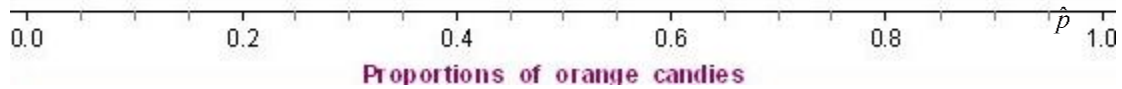


Figure 1: Dot plot for the proportion of orange candies. Your (or your group's) samples.

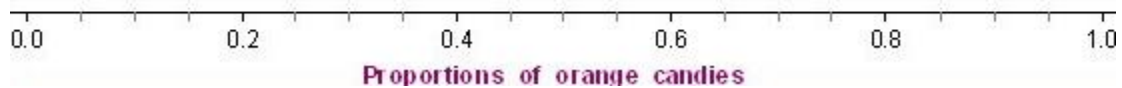


Figure 2: Dot plot for the proportion of orange candies. Samples from entire class