**(TITLE in my MODULE 1)**

**QUANTITATIVE LITERACY; INFERENTIAL STATISTICS - M&M ACTIVITY PT1 - MANDATORY**

(INSTRUCTIONS)

**Sample vs. Population; Inferential Statistics – M&M Activity**

In chapter 1, the Survey is suggested as one of the research methods.  The M&M activity demonstrates the importance of using larger samples to represent a population.  Students will first work on their color numbers and percentages from their own fun size pack of M&M’s (so you wouldn’t have to purchase the M&M’s, I opened 4 fun packs for you).  After you calculate the color percentages from 1 pack, you will combine those colors/numbers with the colors/numbers from a 2nd pack and then with 2 additional packs to show how that changes the percentages (4 packs total).  This way, you can see a tiny individual sample (1 pack) compared to the population and a small group sample (2 packs) as opposed to a larger group sample (all 4 packs). This gives a good picture of why you need a large sample size to ensure that your sample actually “looks” similar to a population (the larger your sample - the more likely it will accurately represent the population).

Using the 3 templates provided, calculate the color/number percentages of 1 fun pack of M&M’s, then an additional pack of M&M’s, and finally, 2 additional packs of M&M’s (there are 4 packs total).

1st - click this link (Template 1) to start – 1 pack (do the calculations).

2nd – click this link (Template 2) to calculate an additional pack (you add these colors/numbers to the 1st pack and calculate).

3rd – click this link (Template 3) to calculate 2 additional packs (you add these colors/numbers to the first 2 packs and calculate).

**\*** When you finish, print out the percentage numbers (for each color in Template 3) and answer this question: “What do the percentages represent and explain how a larger sample gives you a better representation of the population?” Look at your calculations and textbook and think about this.  Email this to me with your 1st homework assignment.  This exercise is mandatory and worth up to 5 points (added to or taken from your first test score).

**\*** Next, using your percentages in template 3, complete the short quiz, in Module 1, on the “Quantitative Literacy; Inferential Statistics - M&M Activity PT2 Quiz”.  This quiz is mandatory and counts toward your final grade (see syllabus).

 **SECOND PART**

(**TITLE – MODULE 1) TEST SET-UP**

**QUANTITATIVE LITERACY; INFERENTIAL STATISTICS - M&M ACTIVITY PT2 QUIZ - MANDATORY**

(INSTRUCTIONS)

Using your percentages in template 3, complete this short quiz on the Quantitative Literacy; Inferential Statistics - M&M Activity.  You may take the quiz 2 times; your highest score will be recorded.

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My quiz looks like this (for each color):

Rounded off, the percentage for the "blue" M&M's was

20%

21%

22%

23%

Then – orange, green, yellow, red, and brown.

For Canvas to score this, I calculated each question to be worth 16.66 points (99.96).