

B=BLUE Y=YELLOW G=GREEN R=RED O=ORANGE DB=DARK BROWN

1. DO NOT open your bag. Estimate how many M&Ms are in your bag without picking up your bag. Then estimate the individual colors of M&Ms in your bag. The sum of your individual colors should add up to your total.

ESTIMATE of total	
ESTIMATE of B	
ESTIMATE of Y	
ESTIMATE of G	
ESTIMATE of R	
ESTIMATE of O	
ESTIMATE of DB	

2. Graph your estimates of each color. Add a title to your graph.
3. Spread the M&Ms out in your bag WITHOUT opening your bag. Put your M&Ms into sets by color. Complete the table below of the actual count of each color.

ACTUAL total	
ACTUAL B	
ACTUAL Y	
ACTUAL G	
ACTUAL R	
ACTUAL O	
ACTUAL DB	

4. Graph the actual number of each color.
5. How many M&Ms are in the bag? _____
6. How far off was your total from your estimate of M&Ms? _____

(At this point you may now open your bag and share your M&Ms with your group)

7. Write the fraction of each color in your bag. For purposes of this exercise, you do NOT need to simplify your fractions.

B =

G =

O =

Y =

R =

DB =

8. The class will now record the data for all of the groups. As each group reads off their data, complete the table on the back.

Team #	TOTAL	BLUE	YELLOW	GREEN	RED	ORANGE	DARK BROWN
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
TOTAL							

9. My class's bags of M&M's have between _____ and _____ candies in a bag.

10. My group's least common color is _____. # of M&Ms _____

11. My group's most common color is _____. # of M&Ms _____

12. My class's least common color is _____. # of M&Ms _____

13. My class's most common color is _____. # of M&Ms _____

STATISTICAL ANALYSIS OF M&Ms

For each color of M&Ms you need to find the mean, median, mode and the range.

MEAN = the average MEDIAN = ordered from least to greatest, the number in the middle*

MODE = the most common number RANGE1 = the smallest and biggest number

RANGE2 = the difference between the smallest and biggest number

* If two numbers are in the middle, the two numbers should be averaged

Note that you do not include the bottom "TOTAL" row in determining any of these numbers.

COLOR	MEAN	MEDIAN	MODE	RANGE 1	RANGE 2
Total				to	
Blue				to	
Yellow				to	
Green				to	
Red				to	
Orange				to	
Dark Brown				to	

Copy the totals for each color as well as the grand total into the table below.

GRAND TOTAL	TOTAL BLUE	TOTAL YELLOW	TOTAL GREEN	TOTAL RED	TOTAL ORANGE	TOTAL DARK BROWN

Utilizing a calculator, determine the decimal amount represented by each color. This is done by dividing that color by the grand total of M&Ms. Round the answer on your calculator to the nearest thousandth.

DECIMAL BLUE	DECIMAL YELLOW	DECIMAL GREEN	DECIMAL RED	DECIMAL ORANGE	DECIMAL DARK BROWN

Next, these decimals need to be converted to percentages. Percent mean “per hundred” so to determine the percent you simply move the decimal point two places to the right (because you are multiplying by 100). For example: $0.358 = 35.8\%$

PERCENT BLUE	PERCENT YELLOW	PERCENT GREEN	PERCENT RED	PERCENT ORANGE	PERCENT DARK BROWN

Based on the results above, what percent of plain M&Ms do you think are actually created in each color?

PERCENT BLUE	PERCENT YELLOW	PERCENT GREEN	PERCENT RED	PERCENT ORANGE	PERCENT DARK BROWN

Below is some nutritional information provided by M&M/Mars. Complete the table below by converting the given units.

Amount per serving of...	Milligram (mg)	Grams (g)	Kilograms (kg)
Total fat		10	
Cholesterol	5		
Protein		2	
Sodium	30		
Total carbohydrates			.034
Sugar		31	