

Name: \_\_\_\_\_ LAVC / Raskoff / Statistics 1 / \_\_\_\_\_

### Probability and M&Ms

Type of M&Ms: \_\_\_\_\_ **DO NOT EAT ANY UNTIL WE'RE DONE!**

1. Look at your sample of M&Ms; count the numbers of each color and fill in the grid below

Your Sample	BROWN	RED	YELLOW	ORANGE	GREEN	BLUE	PURPLE	TOTAL
Number:								

2. What percent does each color represent? (fill in the grid below and show your work)

Percent:								
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3. If you returned all the M&Ms to your cup and you randomly picked one, what is the probability of choosing a (write in the probability for choosing each color and show your work)

Probability:								
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4. How do the answers in Question #2 compare to the answers in Question #3?

5. On the board, we will write in the totals for all samples and then add them up; write those grand totals in the grid below.

Grand Totals	BROWN	RED	YELLOW	ORANGE	GREEN	BLUE	PURPLE	TOTAL
Number:								
Percent:								

6. The M&M/Mars Company reports the following color distribution (write in the appropriate figures from those on the board for your type of M&M)

Company Info	BROWN	RED	YELLOW	ORANGE	GREEN	BLUE	PURPLE	TOTAL

7. Using the company data (#6), what is the probability of choosing a yellow M&M?

8. Using the company data (#6), what is the probability of choosing a yellow or green M&M?

9. Using the company data (#6), what is the probability of choosing a yellow and green M&M?

10. Using the company data (#6), what is the probability of choosing a brown and red M&M?

11. How well do the percentages from your sample (Q#2) match those of the company?

12. How well do the percentages from the class (total) sample (Q#5) match those of the company?

13. If you were in charge of Quality Control at M&M/Mars, what would you say about your product based on our findings from this exercise?