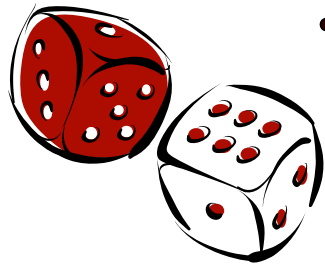
M&M Probability



Directions:

1. With a partner, get an M&M number line, a set of dice, and 24 M&M counters.
2. Each player gets 12 M&M counters.
3. Each player will place all 12 M&M counters vertically along their number line. You may place them anywhere you want from 2 to 12.
4. Once both players have distributed their M&M counters, one player will role the dice. Together, you will find the sum of numbers that appear on the face of the dice. If you have a counter on that number, take it off the number line. If there is no M&M counter above that number, you don't do anything.
5. Continue to role the dice and remove the M&M counters .The first player to remove of all their M&M counters from the number line first wins.
6. Both players will record one set of data using the tally chart on this page. Every time your team rolls the dice and a sum is found, record a tally mark.
7. Both players will answer the questions on a separate piece of paper and then play again!
8. After round 2, answer the next set of questions.
9. Hand in your answers.
10. Find which sum was rolled most frequently. Plot your most frequent sum on the class line plot.

Sum	Frequency Round 1	Frequency Round 2
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

Questions After Round 1:

1. Is the game fair? Explain why you think so.
2. How did you decide where you would place the counters?
3. In round 2, will you place your counters differently?

Class Data (After rounds 1 and 2)

Which sum was rolled the most?

_____

Questions After Round 2:

1. Did the changes in the distribution of the counters change your outcome?
2. Examine the frequency table from rounds 1 and 2. Do you see a pattern?
3. How is probability used in this game?
4. If you only rolled one die, would your outcome be the same?

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