

### **Pre-Algebra Homework 1 Quiz Answers**

1. 0.016      8.04

2. 83

3. \$10.25

4. a) 63 in      b) 14 layers

5. a) 1082      b) 6492

THE MYSTERY SPINNER

Your teacher has a hidden spinner. Your challenge is to perform an experiment that will allow you to predict what the spinner looks like without ever seeing it.



**Your Task:** Your teacher will spin the spinner and announce each result. During the experiment, you will consider several questions about the results and about the hidden spinner. However, you will not be allowed to see it. Using the information you get, work with your team to figure out what the spinner looks like. When you think you know what it looks like, draw a diagram of the spinner.

Orange  


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 ||||  
 4

Green  


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 |||| ||||  
 8

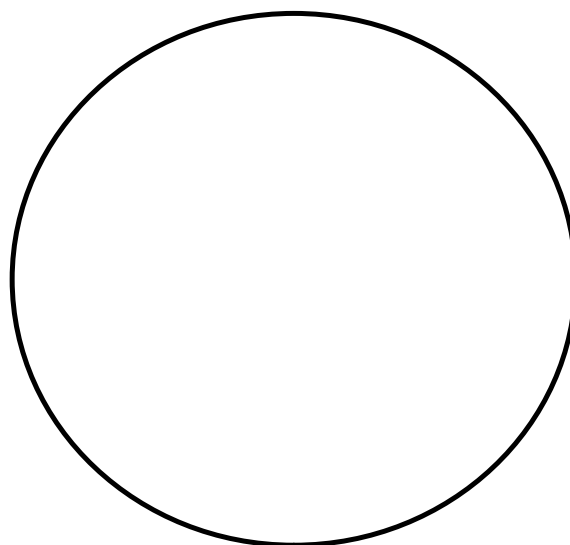
Purple  


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 |||| ||||  
 8

20 spins

Guess what my spinner looks like.

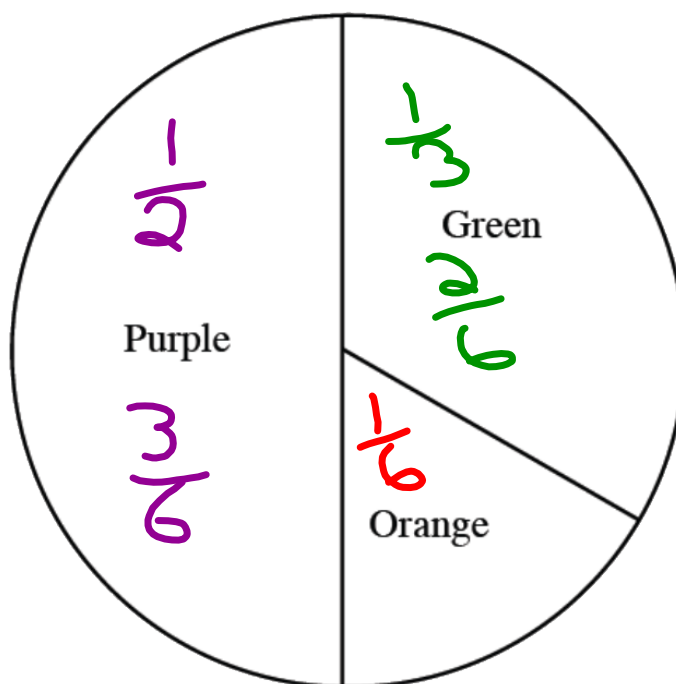


Do you know for sure that the spinner you drew looks exactly like your teacher's? Why or why not?

No!

Experimental probability not the same as theoretical probability.

How does your team's spinner compare to the actual spinner?



Discuss the similarities and differences.

Find the **theoretical probability** (Fraction) for getting each color on your teacher's spinner.

Purple

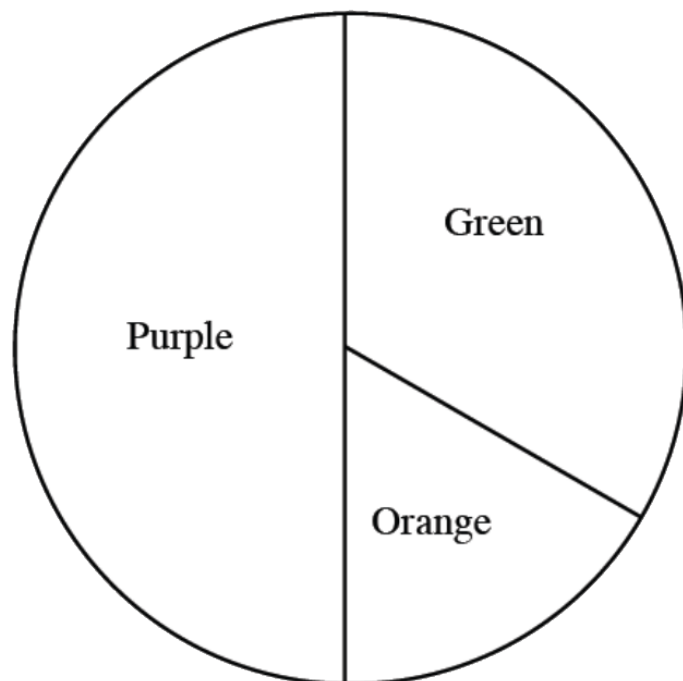
$$\frac{1}{2}$$

Green

$$\frac{1}{3}$$

Orange

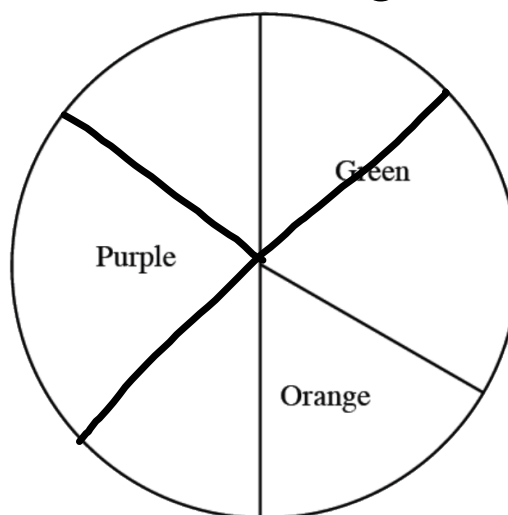
$$\frac{1}{6}$$



What are some reasons the experimental and theoretical probabilities were different?

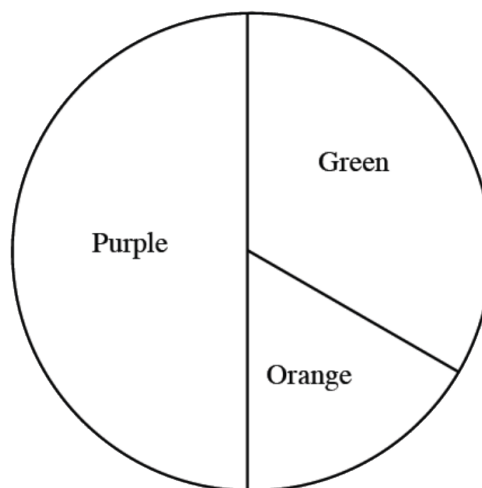
If you were to spin the spinner six times, how many times would you expect it to land on orange?

6 spins  
1 orange



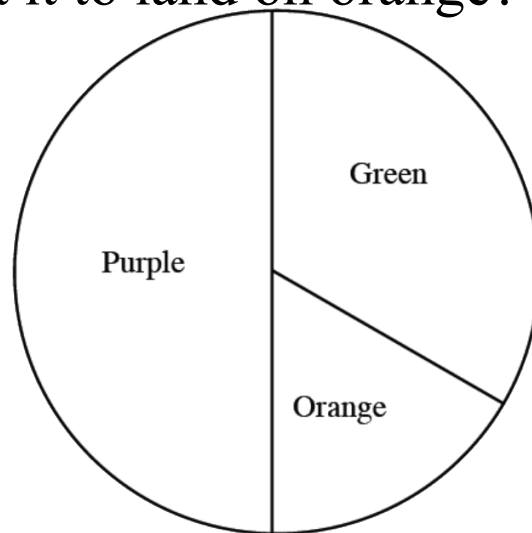
If you were to spin the spinner 48 times, how many times would you expect it to land on orange?

48 spins  
8 oranges



If you were to spin the spinner 100 times, how many times would you expect it to land on orange?

$$\begin{array}{r} 16.\bar{6} \\ 6 \overline{) 100.0} \\ \underline{6} \phantom{0} \\ 40 \\ \underline{36} \\ 40 \\ \underline{36} \\ 40 \end{array}$$



16 or 17 times it should land on orange.



Theoretical Probability = From our math

Experimental Probability = From an actual event