You need out your warm up & agenda

Homework: Probability Practice

warm up:

1. Convert into a decimal: 7/8

2. Solve: -2x + 45 - 6x = -11

3) $\frac{1}{4}+\frac{2}{5}$

Sit silently for the news

Unit 6

Probability

Probability FYI:

$$P(\text{event}) = \frac{\text{favorable number of outcomes}}{\text{total possible outcomes}}$$

probability of an event

P(event)

P(yellow)

Rolling a standard die-

What are the possible outcomes of rolling a die? 1, 2, 3, 4, 5, 6

Flipping a coin-

What are the possible outcomes of flipping a coin? heads, tails

Cards-

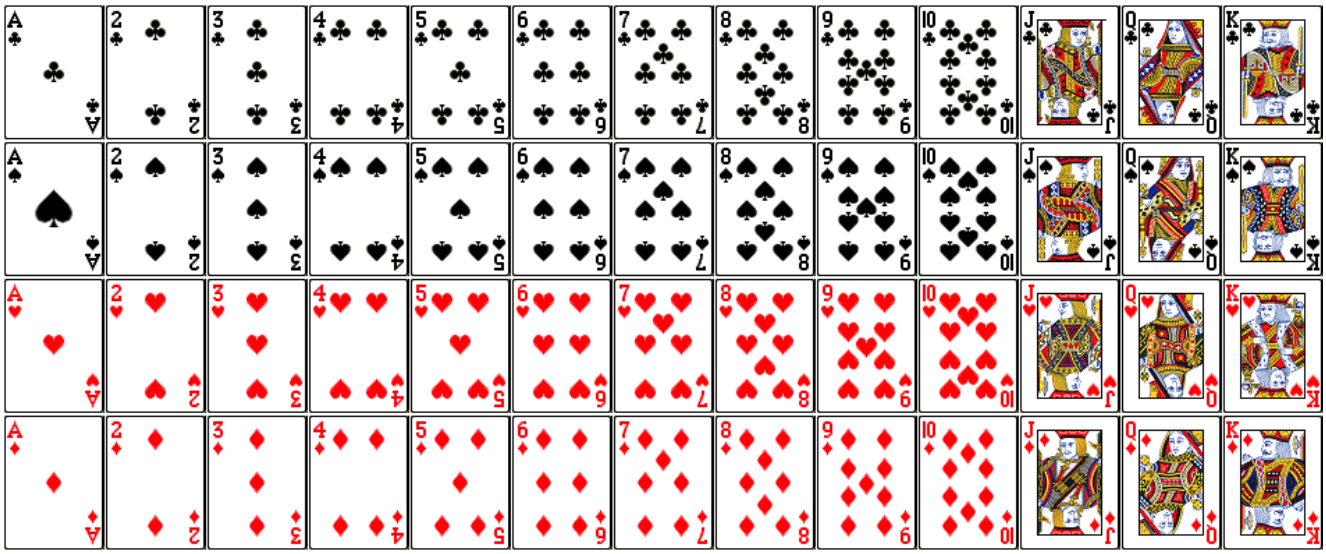
How many total cards is in a standard deck? 52

What are the chances I will draw a red card? 26 black card? 26

What are the different face cards? King, Queen, Jack How many are there in a deck? 12

What are the 4 card suits? ♢, ♡, clubs, spades

How many cards are in each suit? 13



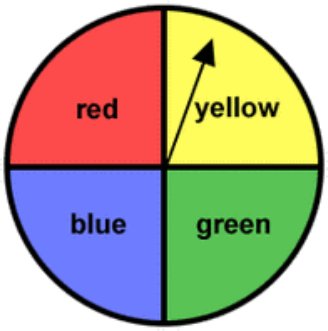
Probability- Theoretical and Experimental Notes

~Probability: The chance an event will occur.

~Theoretical Probability: what should occur when doing an experiment.

~Experimental Probability: what actually happens When doing an experiment.

As the number of attempts (trials) increases, the theoretical and experimental should become closer in value.



P(yellow) $\frac{1}{4}$

P(red) $\frac{1}{4}$

What kind of probability is this? theoretical

Spin the spinner 10 times with your partner and record what you spin:

Color	Tally	
Red		
Yellow		
Blue		
Green		

Answer the following questions based on your results:

P(yellow) _____

P(red) _____

What kind of probability is this? _____

Probability:

$$P(event) = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

Example: What is the probability of rolling an even number?

Step 1 The table shows all of the possible outcomes for rolling two number cubes. Shade all of the possible outcomes that are doubles.

The probability of rolling doubles is 36.

(1, 1)	(2, 1)	(3, 1)	(4, 1)	(5, 1)	(6, 1)
(1, 2)	(2, 2)	(3, 2)	(4, 2)	(5, 2)	(6, 2)
(1, 3)	(2, 3)	(3, 3)	(4, 3)	(5, 3)	(6, 3)
(1, 4)	(2, 4)	(3, 4)	(4, 4)	(5, 4)	(6, 4)
(1, 5)	(2, 5)	(3, 5)	(4, 5)	(5, 5)	(6, 5)
(1, 6)	(2, 6)	(3, 6)	(4, 6)	(5, 6)	(6, 6)

Step 2 Roll two number cubes and record the number of doubles in the table. Repeat the experiment 50 times.

Number of Rolls	Number of Doubles
x10	1

Roll two number cubes and record the number of doubles in the table. Repeat the experiment 50 times.

Number of Rolls	Number of Doubles
50	

Step 3 Find the relative frequency of rolling doubles. Use the ratio $\frac{\text{number of times doubles were rolled}}{\text{number of rolls}}$.

Find the relative frequency of rolling doubles. Use the ratio $\frac{\text{number of times doubles were rolled}}{\text{number of rolls}}$.

Are the ratios in Steps 1 and 3 of the Investigation the same? Explain why or why not.

Suppose the number cubes are rolled 100 times. Would you expect the results to be the same? Explain why or why not.

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