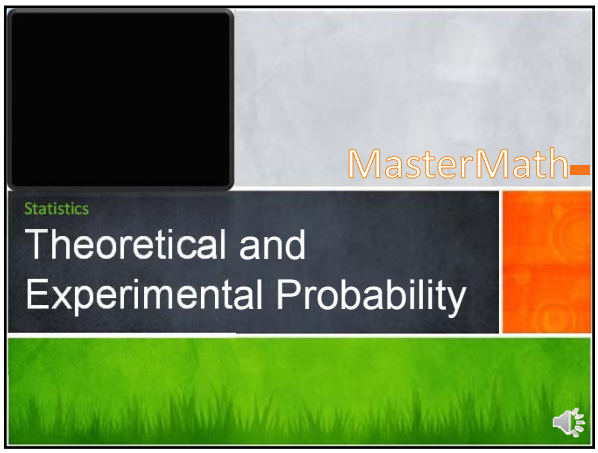
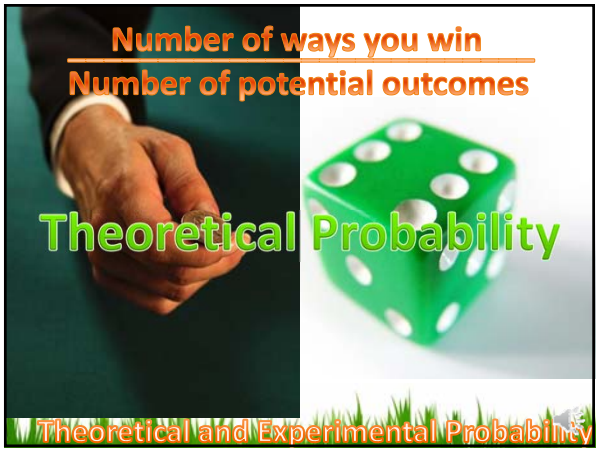
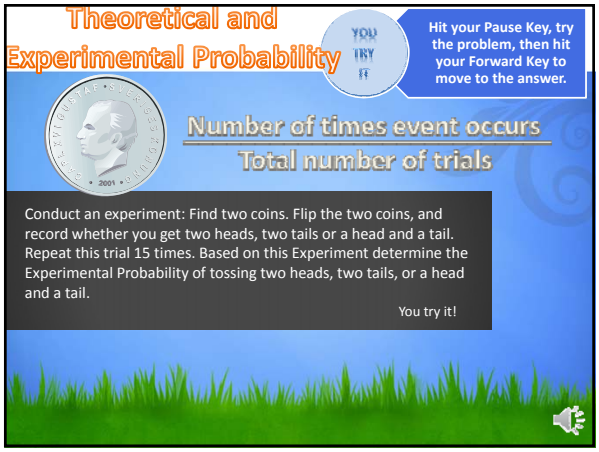
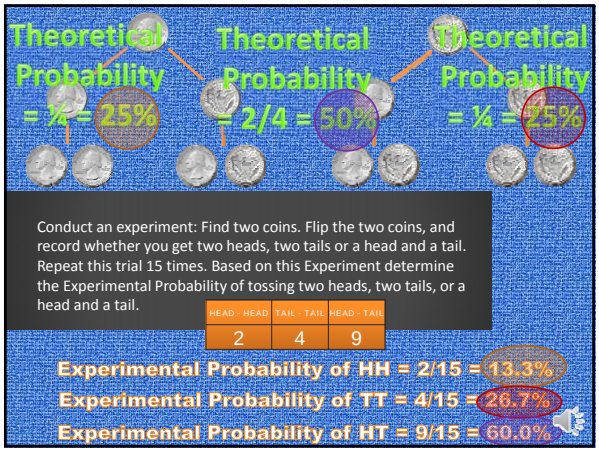

MasterMath
Statistics
Theoretical and Experimental Probability


Number of ways you win
Number of potential outcomes
Theoretical Probability
Theoretical and Experimental Probability


Experimental Probability
Theoretical and Experimental Probability


Experimental Probability
Number of times event occurs
Total number of trials
2,695 / 4,250 = .6341 = 63.4%
Theoretical and Experimental Probability

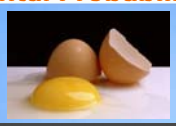

Theoretical and Experimental Probability
YOU TRY IT
Hit your Pause Key, try the problem, then hit your Forward Key to move to the answer.
Number of times event occurs
Total number of trials
Conduct an experiment: Find two coins. Flip the two coins, and record whether you get two heads, two tails or a head and a tail. Repeat this trial 15 times. Based on this Experiment determine the Experimental Probability of tossing two heads, two tails, or a head and a tail.
You try it!


Theoretical Probability = ¼ = 25%
Theoretical Probability = 2/4 = 50%
Theoretical Probability = ¼ = 25%
Conduct an experiment: Find two coins. Flip the two coins, and record whether you get two heads, two tails or a head and a tail. Repeat this trial 15 times. Based on this Experiment determine the Experimental Probability of tossing two heads, two tails, or a head and a tail.
HEAD - HEAD
TAIL - TAIL
HEAD - TAIL
2
4
9
Experimental Probability of HH = 2/15 = 13.3%
Experimental Probability of TT = 4/15 = 26.7%
Experimental Probability of HT = 9/15 = 60.0%

Theoretical and Experimental Probability

YOU TRY IT

Hit your Pause Key, try the problem, then hit your Forward Key to move to the answer.

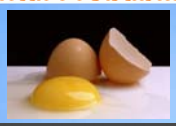


In your job as an egg checker for Greg's Grocery, you check 88 cartons of eggs and find that 12 of them have at least one cracked egg. Based upon this experiment, what is the Experimental Probability that a carton of eggs will have at least one cracked egg?

You try it!

Theoretical and Experimental Probability

YOU TRY IT



In your job as an egg checker for Greg's Grocery, you check 88 cartons of eggs and find that 12 of them have at least one cracked egg. Based upon this experiment, what is the Experimental Probability that a carton of eggs will have at least one cracked egg?

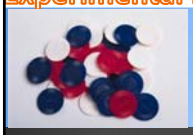
You try it!

$12 \div 88 = .1363 = 13.6\%$

Theoretical and Experimental Probability

YOU TRY IT

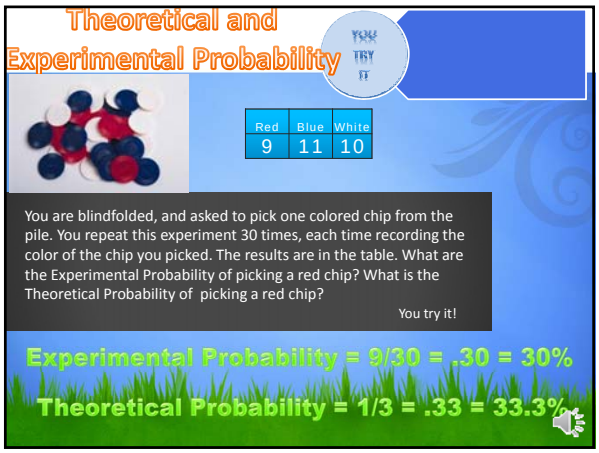
Hit your Pause Key, try the problem, then hit your Forward Key to move to the answer.

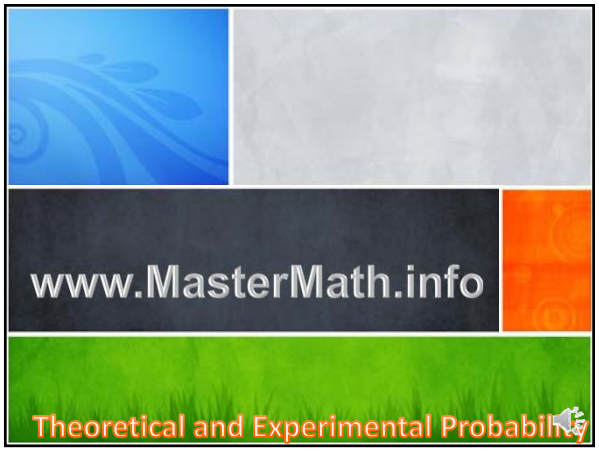


Red	Blue	White
9	11	10

You are blindfolded, and asked to pick one colored chip from the pile. You repeat this experiment 30 times, each time recording the color of the chip you picked. The results are in the table. What are the Experimental Probability of picking a red chip? What is the Theoretical Probability of picking a red chip?

You try it!


Theoretical and Experimental Probability
Red
Blue
White
9
11
10
You are blindfolded, and asked to pick one colored chip from the pile. You repeat this experiment 30 times, each time recording the color of the chip you picked. The results are in the table. What are the Experimental Probability of picking a red chip? What is the Theoretical Probability of picking a red chip?
You try it!
Experimental Probability = 9/30 = .30 = 30%
Theoretical Probability = 1/3 = .33 = 33.3%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