

Math 7H - Unit 7

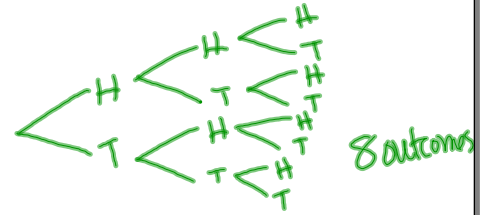
Day 8 - Fundamental Counting Principle

Lesson Objectives:

- I can use a simulation to generate frequencies for compound events.
- I can identify the outcomes in the a sample space which compose an event.

Remember, you can draw tree diagrams, write lists, or create tables to figure out how many **outcomes** are possible.

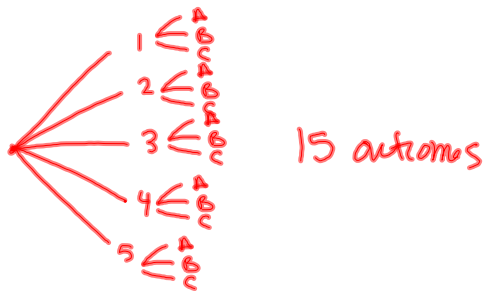
Three coins are being tossed. Draw a tree diagram to determine the number of possible combinations.



Jun 27-3:40 PM

Apr 29-3:48 PM

The basic skateboard model has 5 choices for decks (1,2,3,4,5) and 3 choices for wheel sets (A,B,C). How many different skateboards are possible?



You can also find the number of possible outcomes by multiplying.

Fundamental Counting Principle: If event M can occur in m ways and is followed by event N than can occur in n ways, then the event M followed by event N can occur in $m \times n$ ways.

A cell phone company offers 3 payment plans, 4 styles of phones, and 6 decorative phone wraps. How many phone options are possible?

$$3 \cdot 4 \cdot 6 = 72 \text{ phone options}$$

Apr 29-3:50 PM

Apr 29-3:50 PM

When you rent ski equipment at Bridger Peaks Ski Resort, you choose from 3 different types of ski boots, 5 lengths of skis, and 4 types of poles. How many different outfits are possible?

$$60 = 3 \cdot 4 \cdot 5$$

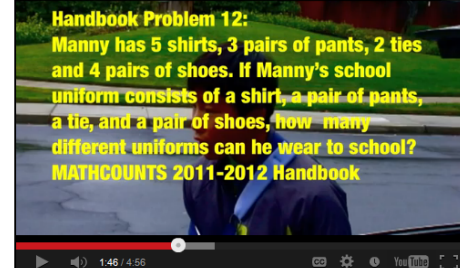
At Pete's Sub Shop, you can make a sub from 5 different types of bread, 3 different meats, 4 cheeses, and 6 vegetables. How many different subs could you make?

$$5 \cdot 3 \cdot 4 \cdot 6 = 360 \text{ subs}$$

Apr 29-3:50 PM

Reel Math Challenge Winner - Mix n Match: the Power of Clever Combinations

Reel Math Challenge - Mix n Match: the Power of Clever Combinations



Click Globe to open video.

Apr 30-3:16 PM

How many outcomes are possible in a multi-state lottery game where the winning number is made up of 6 numbers from 1 to 50 chosen at random? Assume all numbers are eligible each draw.

$50 \cdot 50 \cdot 50 \cdot 50 \cdot 50 \cdot 50$

$\frac{1}{15,625,000,000}$

Dave Ramsey talking
about stupidity of
playing the lotto.

Apr 29-3:51 PM

Homework

Outcomes WKS

Rewrite Test Questions Unit 5

* Individual Think Time *



Today we're working by...

What to do if you get stuck...

Reread the problem. Did you write it down correctly?

Reread your notes. Is there a problem similar that we did together in class?

Find a problem similar in your book. Try this one to see if it helps.

Skip the problem until the end of Individual Think Time. Then ask an

"educated" question of a neighbor or Mrs. Call.



Jul 8-10:14 AM