

Date: _____

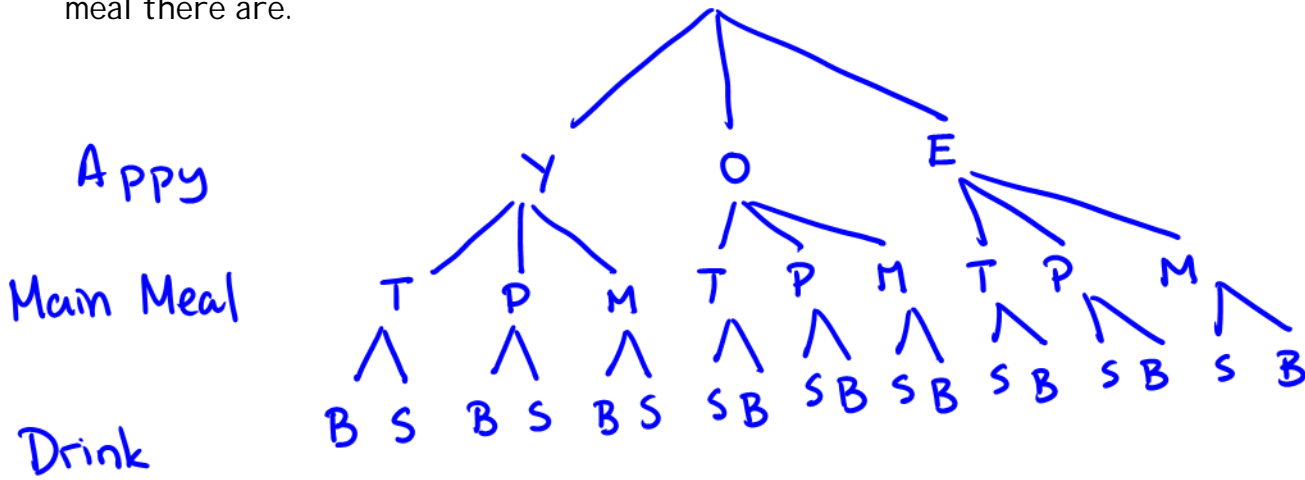
11.2 Notes: Outcome of Independent Events

Chef Worobetz has a new lunch special. For \$6 you can choose one appetizer, one main meal and one drink.

Appetizers: Yam Fries, Ostrich Wings, Escargot

Main Meals: Turkey Sandwich, Pigeon Toe Pie, Mac and Cheese Surprise

Use a tree diagram to find out how many different combinations of appetizer and main meal there are.



Chef offers the following drinks to go with the meal combinations.

Drinks: Spinach Milkshake, Banana Juice

How could you add these to your existing tree diagram to find out the total number of possible combinations?

Find the following:

- a) # of appetizers 3
- b) # of main meals 3
- c) # of drinks 2

18 meals

How are these numbers related to the total number of combinations?

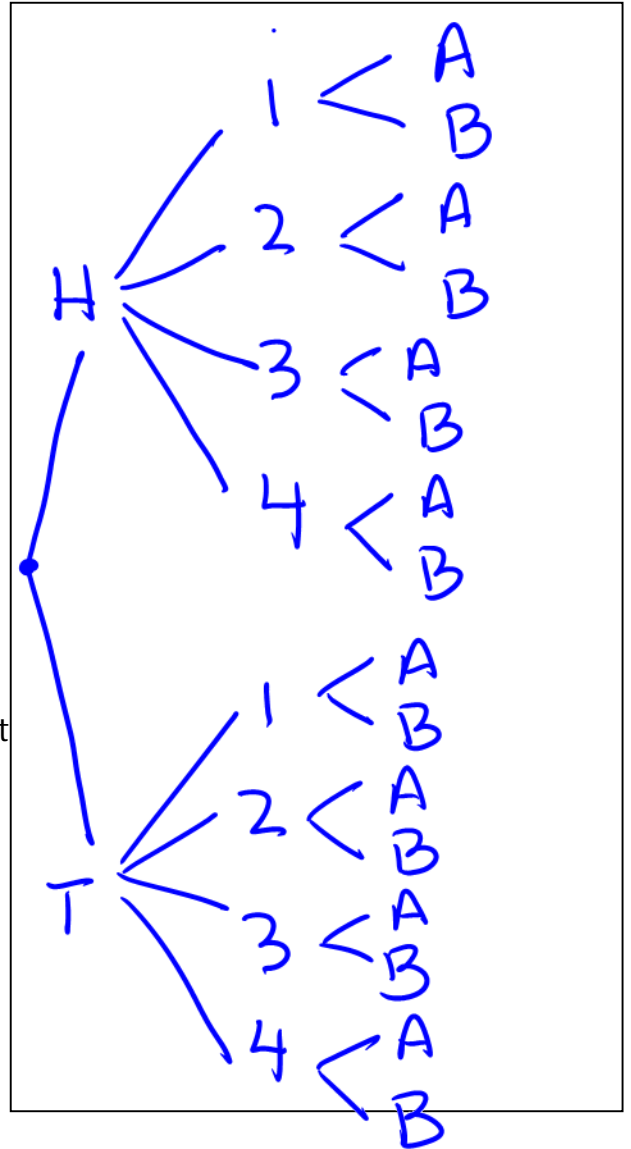
$3 \times 3 \times 2 = 18$ # of possible combinations can be found by multiplying.

Fraser is playing a game where he flips a coin, rolls a 4-sided die and spins a 2 section spinner. How many outcomes do you think there are in total? Can you make a prediction without drawing a tree?

Coin , 4 sided die, 2 section.
 $2 \times 4 \times 2$
 16 combinations

Check your answer by drawing a tree diagram to the right:

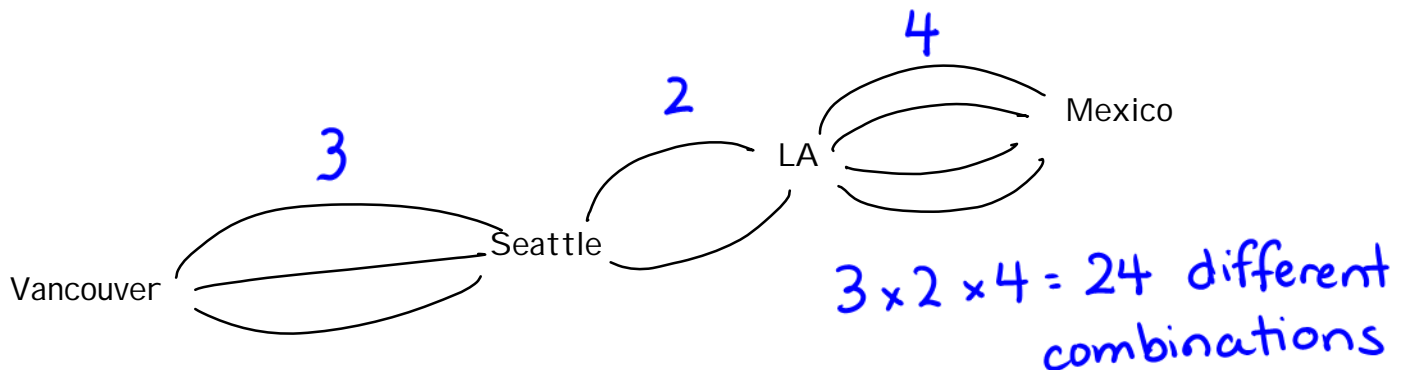
Note: A tree diagram doesn't have to go from the top down. It can also go from left to right!



Brangelina has 5 different shirts, 4 hats, 3 pairs of pants and 9 pairs of shoes. How many different outfits can Brangelina come up with to go to the Fall Ball at the Mall.

$$5 \times 4 \times 9 \times 3 = 540$$

Peter and Janine are flying to Mexico. There are several flights that go through each city on the way. How many different paths are there in total?



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