

# Math 8 Lesson 11.2

Friday, April 21, 2017 6:04 PM



11.2 - blank

Date: \_\_\_\_\_

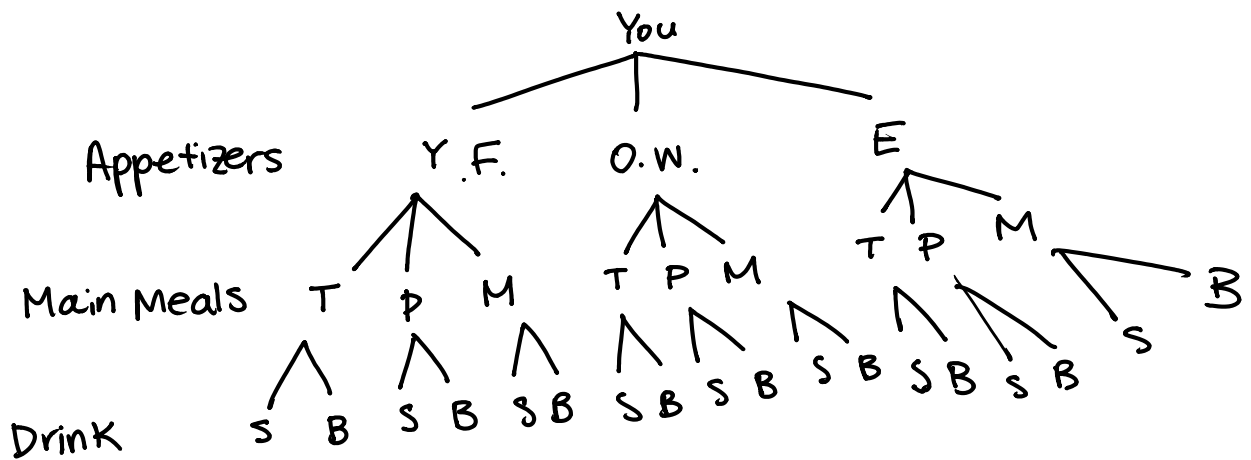
### 11.2 Notes: Outcome of Independent Events

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? **2 branches added to every path**

Find the following:

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

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

**# of combinations is the product of each choice.**

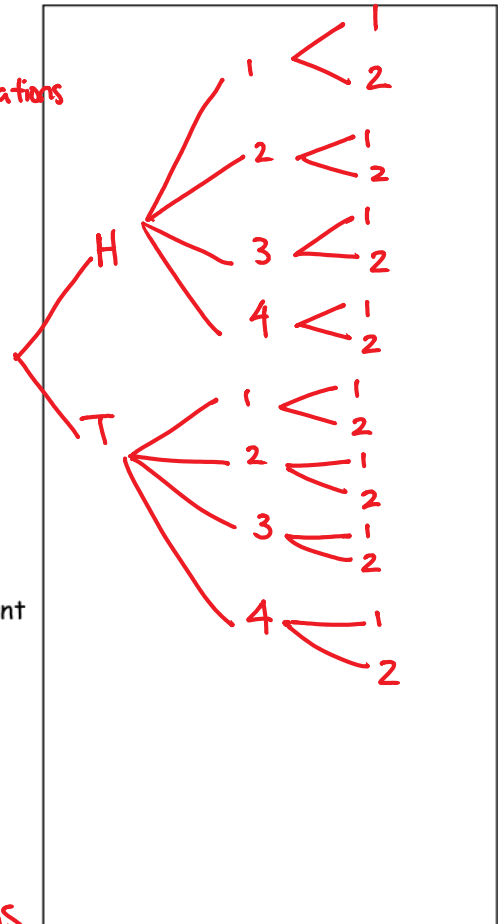
Fraser is playing a game where he <sup>2</sup>flips a coin, rolls a <sup>4</sup>4-sided die and spins a <sup>2</sup>2 section spinner. How many outcomes do you think there are in total? Can you make a prediction without drawing a tree?

$$2 \times 4 \times 2 = 16 \text{ combinations}$$

<sup>2</sup> coin
<sup>4</sup> die
<sup>2</sup> spinner
= 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.

$$5 \times 4 \times 3 \times 9 = 540 \text{ possible combinations}$$

shirt
hat
pants
shoes

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?

