Homework 5/6/19

Directions: Solve each problem.

<u>Create a sample space</u> (tree diagram or list) that represents <u>all</u> the combinations for questions 1 and 2.

1) Victor was trying to decide what to wear for his first day of school. The clothes in his closet are listed below. How many different outfit choices does he have? _____
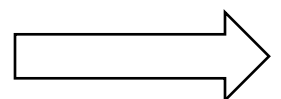
Shirt Color	Bottom
Blue	Shorts
Orange	Sweat
Yellow	pants
	Khakis
	Jeans

2) A video game lets you choose a character's hair style, hair color, and their superpower. Their choices are listed below. How many different combinations do you have to choose from? _____

Hair Style	Hair Color	Superpower
Spiky	Black	X-Ray
Long	Blonde	Vision
Curly		Speed

Use the <u>Fundamental Counting Principle</u> to answer questions 3 and 4.

3) Olivia could pick on candy and one drink at a Halloween party. Her candy options were Taffy or Chocolate and her drink options were Lemonade or Soda. How many different combinations could she make? _____

4) Nancy was creating a card for her friend. She could use one color paper and one sticker. She had 5 different paper options and 4 different sticker options. How many combinations could she make? _____

Complete questions 5 and 6 by looking at the multiple-choice answers.

5) A bookshelf contains a dictionary, *D,* a novel, *N,* and a textbook, *T.* Which represents all the possible ways of arranging the three books do the dictionary is NOT next to the textbook?
   a. DTN, DNT
   b. DNT, TND
   c. DTN, NDT, TDN, NTD
   d. DNT, DTN, NDT, NTD, TDN, TND

6)

If Taylor chooses one marble from the bag, holds it, and chooses another marble, which group shows all of the possible combinations Taylor could draw from the bag?

a. Black — White   White — Spotted

b. Black — White   Gray ⟨White / Black   White ⟨Black / Gray   Spotted ⟨White / Black

c. Black — Gray (White, Spotted)   White ⟨Gray / Spotted   Gray — Spotted

d. Black — Gray (White, Spotted)   Gray — Black (White, Spotted)   White — Gray (Black, Spotted)   Spotted — Black (White, Gray)

Directions: Complete questions 7-10 by stating if the event is impossible, unlikely, equally likely, likely, or certain.

7) The chance that it will snow in Arlington in July. _____

8) The chance of tossing a coin and getting tails. _____

9) The chance tomorrow is Tuesday. _____

10) The chance on Friday 5th graders will wear their tie-dye shirts. _____