You can draw a tree diagram to find the number of possible combinations or outcomes.

Example Haymitch will wear either a white, purple, or yellow tie with a white, purple, or yellow jacket. The tie and jacket cannot be the same color. How many different choices does Haymitch have?

Tie	Jacket	Outcomes	
	P	W, P	
$W \leq$	Y	W, Y	There are 6 possible
	W	P, W	outcomes.
Р 🧹	Y	Р, Ү	
	W	Y, W	
Y —	— P	Y, P	

Create a tree diagram with titles or create an organized list/table of the outcomes possible. Then give the total number of outcomes.

1.	Katniss bought 3 pins: one with a star, a butterfly, and a mockingjay. She has a blue dress and a green dress. How many dress/pins combinations are possible?
2.	Cinna is trying to figure out what Katniss should wear for the interview. She can wear a blue, pink, purple, or red dress. Then she can either wear gold, silver, black, or white high heels. What are all the different combinations?
3.	The Final Four tributes in the Hunger Games were: Foxface, Cato, Peeta, and Katniss. What are all the possible combinations of the top 2?
4.	Katniss and Gale take a quick trip to the Hob. Katniss has a choice to buy a rabbit, a leg of a wild dog, or a bowl of soup. She also has a choice of a free item with the meat: a district 12 token, an arrow, or a knife. What are all the combinations?
5.	Caesar Flickerman is making his yearly Hunger Games interview with the tributes. Caesar can dye his eyebrows mockingjay blue, amber red, or mockingjay pin gold. He can dye his hair President Snow white or Capitol rainbow. What are the combinations for Caesar?
6.	Katniss is at the cornucopia. She can get a square of plastic, a backpack, some bows and arrows, or a tent. Then she can either run the opposite direction of either Cato, Thresh, or Peeta. Next, she can be allies with the Careers or Rue. List all the possible outcomes.
7.	Katniss wanted to get rid of the Careers by throwing a tracker-jacker nest on them, destroying their food supply, or singing for them and damaging their ears. After this she is going to either leave them, throw them in a river, or go find Peeta. List the outcomes.
8.	The people who live in the Capitol are betting on who will win the Hunger Games. The tributes are Beth and Liz. After one wins, she will either be famous and rich, become known as the greatest person in the world, or be forgotten in a week. During the Games she would have run away, tried to fight, or lived in the trees. What is the probability of Liz winning, being known as the greatest person in the world, and living in the trees?

Create a tree diagram with titles or create an organized list/table of the outcomes possible.	Then
give the total number of outcomes.	

	e the total r	univer of	outcomes.								
1.	Katniss has 3 bows to choose from: bronze, silver, and gold. She also has 3 arrows: sharp, pointy, and dull. How many different combinations can she make?										
2.	Katniss Everdeen is in the Hunger Games and needs to choose an ally and a bow. She's decided either Peeta, Rue, Foxface, or Thresh will be her ally. She will use either a longbow, crossbow, or a recurve bow. How many different combinations can she make?										
3.	Katniss and Peeta are at the training center for the Hunger Games. They can visit archery, knot tying, or camouflage before lunch break. Afterwards, they can go to spear throwing, knife throwing, or weight lifting. How many different ways can they visit the stations?										
4.	Katniss has to choose between marigolds, zinnias, roses, and tulips to adorn Rue. She also has to choose if she wants red, white, black, or gold. If she chooses zinnias she can't choose black or gold. She can't choose roses with gold. How many choices does she have?										
5.	In the Hunger Games Katniss has 3 possible sponsors: a rich man, a Capitol woman, or anonymous. They can buy either a knife, a lamp, bread, or an exploding pineapple. What is the probability Katniss' first gift is an exploding pineapple given from an anonymous person?										
6.	Peeta Mellark has three different types of icing that are chocolate, cream cheese, and butter crème. He needs cake batter to go with the icing. His choices are red velvet, birthday cake, and strawberry. How many possible icing-batter outcomes are there?										
7.	If a coin is tossed three times to help determine which animal to unleash in the arena, which lists all the possible outcomes?AHT, TH, HH, TTCHHT, HTH, HTT, THH, THT, TTHBHHH, TTT, HHT, HTTDHHH, HHT, HTH, HTT, THH, THT, TTH, TTT										
	Cinna spins the spinner below to choose which dress for Katniss to wear. He will then flip a coin to determine which pair of shoes to go with it. Which shows all the possible outcomes that could result?										
	Spinner	1	2	3	4	1	2	3	4		
	Coin	Н	Т	Н	Т	Н	Т	Н	Т		
8.	B.		L	I	1	L	1		J		
	Spinner	1	2	3	4]					
	Coin	Н	Т	Н	Т	1					
	C.		ıI			1					
	Spinner	1	2	3	4	1	2	3	4		
	Coin	Н	Н	Н	Н	Т	Т	Т	Т		
	D.										
			2	2		1	2	3	4		
	Spinner Coin	1 H	2 H	3 T	4 T	1 H	H H	3 T	4 T		