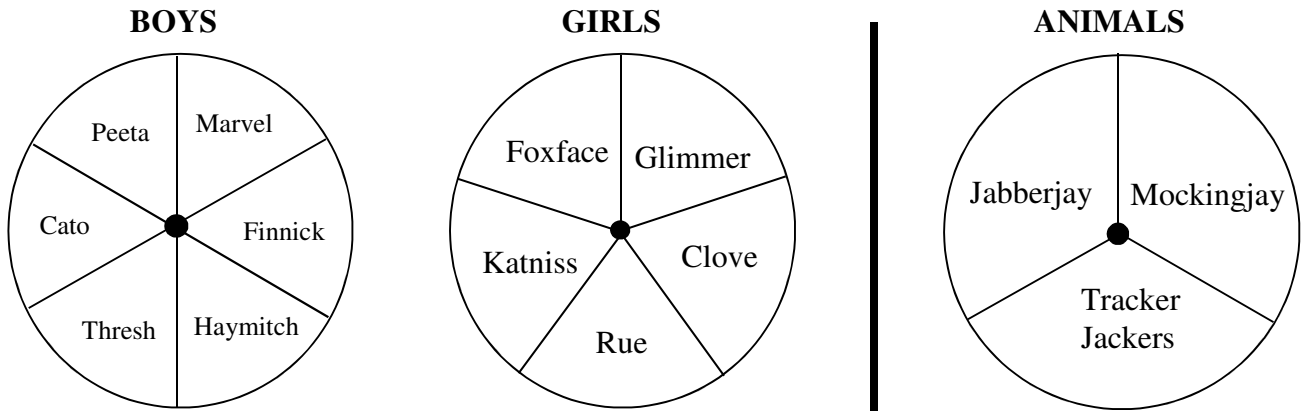


## HUNGER GAMES INDEPENDENT EVENTS

If the outcome of one event does not affect the outcome of a second event, the two events are **independent**. The probability of two independent events, A and B, is equal to the probability of event A times the probability of event B.  $P(A, B) = P(A) \cdot P(B)$



1.	How many outcomes are possible when you spin all three spinners (hint: Counting Principle)	
2.	If you made a tree diagram showing all these outcomes, how many branches would show landing on Peeta, Foxface, and Mockingjay?	

For #3-10, the first two spinners above are spun. **Find the probability of each event.**

3.	P(Peeta, Katniss)		4.	P(Cato, Clove)	
5.	P(boy, girl)		6.	P(contains an E, starts with R)	
7.	P(ends with H, has 2 vowels)		8.	P(double letters, double letters)	
9.	P(ends with consonant, Rue)		10.	P(not Cato, not Foxface)	

A third spinner is now added. **Write the expression and find the probability of each event.**

11.	P(Peeta, Katniss, Mockingjay)		
12.	P(Marvel, Glimmer, ends with "jay")		
13.	P(not Thresh, not Rue, not tracker jackers)		
14.	P(boy, girl, animal)		
15.	P(contains H, contains E, contains Y)		
16.	P(contains E, contains A, contains R)		
17.	P(not Marvel, Clove, not jabberjay)		

18.	If a 4 <sup>th</sup> spinner was added above, would the probabilities of the four events happening increase or decrease? Why?	
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A quarter and a dime are tossed. **Find the probability of each event.**

1.	P(T, H)		2.	P(both the same)	
3.	P(T, T)		4.	P(at least one head)	

Suppose you write each letter of “Effie Trinket” on a separate index card and select one letter from each name without looking. **Find the probability of each event.**

5.	P(vowel, vowel)		6.	P(consonant, vowel)	
7.	P(F, E)		8.	P(T, K)	

Peeta’s bakery offers 5 kinds of muffins, one of which is blueberry. The bakery also offers 5 kinds of beverages, one of which is orange juice. **Find the probability of each event.**

9.	P(blueberry muffin)		10.	P(orange juice)	
11.	P(blueberry muffin and orange juice)		12.	P(blueberry muffin, some beverage other than orange juice)	

Suppose you toss a coin and pick a card from a pile of 16 cards, each printed with a letter from the name “Caesar Flickerman” **Find the probability of each of the following.**

13.	P(heads, M)		14.	P(tails, A)	
15.	P(tails, E)		16.	P(heads, vowel)	
17.	P(tails, consonant)		18.	P(heads, a letter in “wiress”)	

President Snow spins a spinner with 4 equally likely outcomes: blue, red, yellow, and red. He will also roll a die. **Find the probability of each of the following.**

19.	P(blue, 2)		20.	P(blue, not 2)	
21.	P(yellow, even)		22.	P(red, even)	
23.	P(not blue, 5)		24.	P(not blue, odd)	

A bag contains 6 marbles: one black, 2 white, and 3 striped. Seeder picks one marble, replaces it, and then picks a second marble. **Find the probability of the following.**

25.	P(black, white)		26.	P(black, striped)	
27.	P(white, striped)		28.	P(not white, striped)	
29.	P(black, black)		30.	P(striped, striped)	
31.	P(white, not white)		32.	P(not white, not white)	