Topic: 'OR' (Mutually Exclusive and Inclusive) Probability   **Date**: _____

Learning Objective(s) _____ :

_____

_____

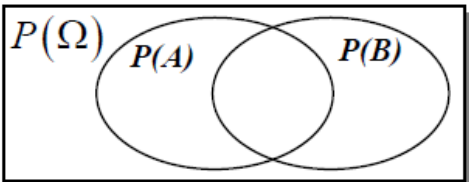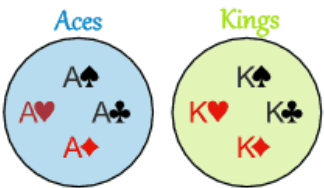| **Main Ideas/ Questions**	**Notes**
'OR' Characteristics	**'OR' Probability** – The _____ which at least _____ event occurs P(A or B) = P(A) + P(B) – P(A and B) ← ***IF NEEDED!!*** **Written as fractions first! *Two possibilities:* • **Mutually Exclusive Events** – Events which _____ have any overlapping outcomes and have the ***same sample space***. $P(\Omega)$ *P(A)* *P(B)* • **Inclusive Events** – Events which _____ have overlapping outcomes **OR** the ***two events have different*** _____ $P(\Omega)$ *P(A)* *P(B)*
*** MUST SUBTRACT OUT OVERLAPPING EVENTS ('AND')*	
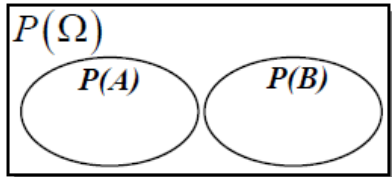
Example 1:
P(drawing an Ace or drawing a King)

Aces   Kings
A♠   K♠
A♥   A♣   K♥   K♣
A♦   K♦

Example 2:
P(drawing a Heart or a King)

Hearts   Kings   =   Hearts   Kings   +   —   King of Hearts
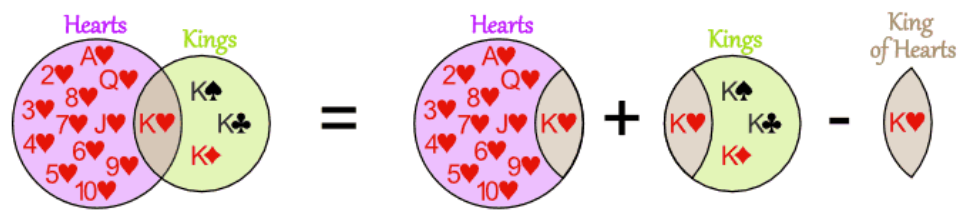
Main Ideas/ Questions	**Notes**
Examples	1. P(rolling a 4 or rolling an odd number)
	2. P(rolling a 1 or rolling a number less than 3)
	3. P(flipping a head or rolling an even number)
	4. A store owns 30% red shirts, 20% blue shirts, 40% green shirts, and 10% yellow shirts. What is the probability that a customer will chose a red or yellow shirt?
	5. P(Picking a Club or a Heart)
	6. P(Picking a Queen or Face Card)
	7. P(not rolling a 4 or picking a red 6 out of a standard deck)
	8. Of the 550 people who came into the Italian deli on Friday, 220 bought subs and 182 used cash. Half of the people who bought subs used cash. What is the probability that a customer bought a sub or used cash?
	9. P(drawing a 2 ∪ drawing an odd number)
	10. P(drawing a King ∪ drawing a red card)