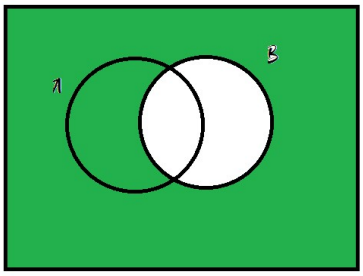
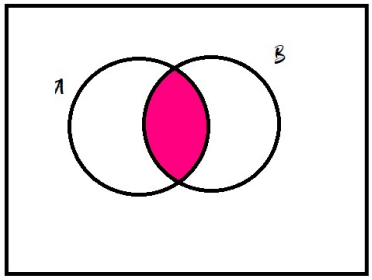
Probability Practice Quiz

Set Notation and Venn Diagrams: Match the set notation to its Venn diagram. Each option will be used only once.

a. $A \cap B$	b. $(A \cap B)'$	c. $A \cup B$	d. B'	e. $B \cap A'$	f. $A \cap B'$



1.



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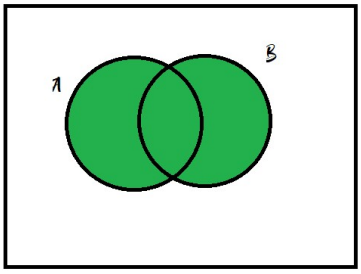

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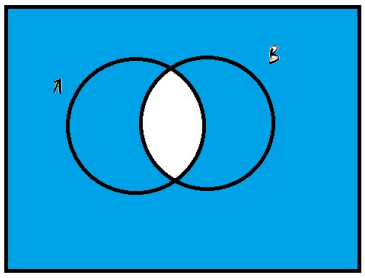

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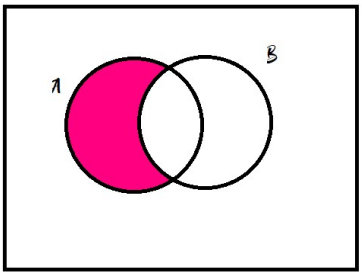

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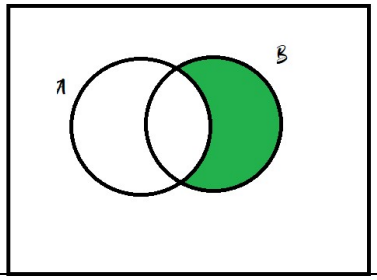


6.

Set Notation: Answer the following questions based on the universal set and subsets given below. **(Universal)Ω = {A, B, C, D, E, F, G, 1, 2, 3, 4, 5, 6, 8, 9, 11}**

€ = {A, D, E, F, 1, 2, 4 , 6, } £ = { A, B, C, F, 1,2, 3, 5 }

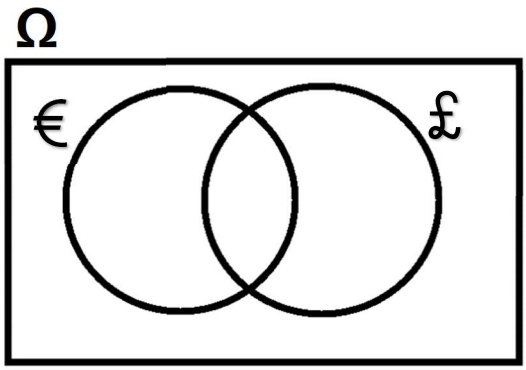
7. List the elements of the set (€ ∩ £)

8. List the elements of the set (€ ∪£)

9. List the elements of the set (€ ∪£)'

10. List the elements of the set (€ ∩ £')

11. Draw a Venn Diagram to Represent the Sets:



Probability

Find the experimental probability of the following events. Your answer should be a fully reduced fraction.

12. Bridget categorized all the people who entered the theatre for a show by their hair color. The data is shown in the table below

black	13
gray	35
brown	22

a. Determine P(black) : _____

b. Determine P(grey) : _____

c. Determine P(black or brown) : _____

13. An ice cream store recorded its sales for the week in the summer. Their data is shown below.

mint	307
rocky road	219
mocha	244

What is the experimental probability that the next cone sold is mocha? Your answer should be a fully reduced fraction.

_____

14. Determine the following probabilities from the table below:

	Organic	Non-organic
Apples	13	8
Peaches	6	3
Blueberries	13	12

a. P(Apple and Non-Organic) = _____

b. P (Apple or Non- Organic) = _____

c. P (Blueberries or Peaches) = _____

d. P(Blueberry and Organic)= _____

e. P(Blueberries or Organic)= _____

15. Determine the Following probabilities from the data:

P(A) =.8 P(B) =.5 $P(A \cap B) = .4$ Determine: $P(A \cup B)$ = _____

16. P(C)=.6 P(B) = .5 P(C U B) = .8 Determine: $P(C \cap B)$= _____

Determine if the following are mutually exclusive or overlapping, then find the probability of each.

17. In a deck of cards find the probability of drawing a Jack or a heart.

Mutually Exclusive or Overlapping? _____

P (Jack or Heart)= _____

18. In a deck of cards, find the probability of drawing a Queen or Even Numbered card.

Mutually Exclusive or Overlapping? _____

P(Queen or Even Numbered Card) = _____

19. You're rolling two dice and looking at their sum. What is the probability of rolling an even sum or a sum greater than 8?

Mutually Exclusive or Overlapping? _____

P(Even sum or Sum greater than 8)= _____

	1	***2***	***3***	***4***	***5***	***6***
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

20. Answer the questions about probabilities from the sum chart.

a. P (Even sum and sum greater than 8)= _____

b. P(odd sum or sum less than 6) = _____

c. P(sum of 12 or sum of 3) = _____