Consider the following Venn Diagram of two sets.
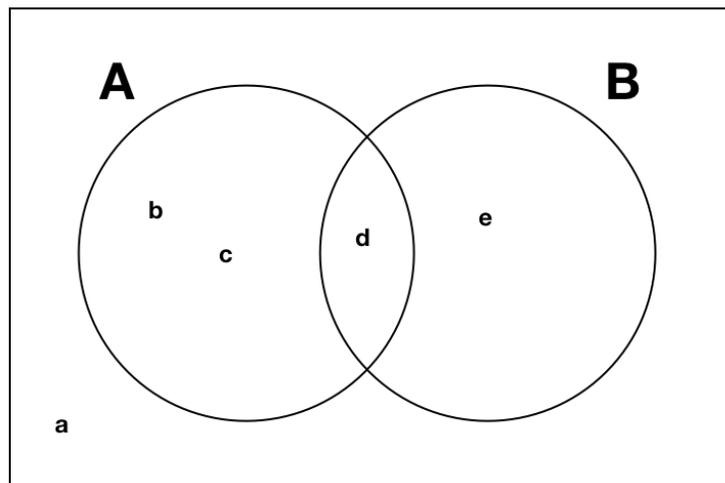
Determine the following.

1. A 2. B

3 $A^{/}$ 4. $B^{/}$

5. $A \cup B$ 6. $A \cap B$

7. U 8. $n(U)$

9. $n(A)$ 10. $n(B)$

11. $n(A^{/})$ 12. $n(B^{/})$
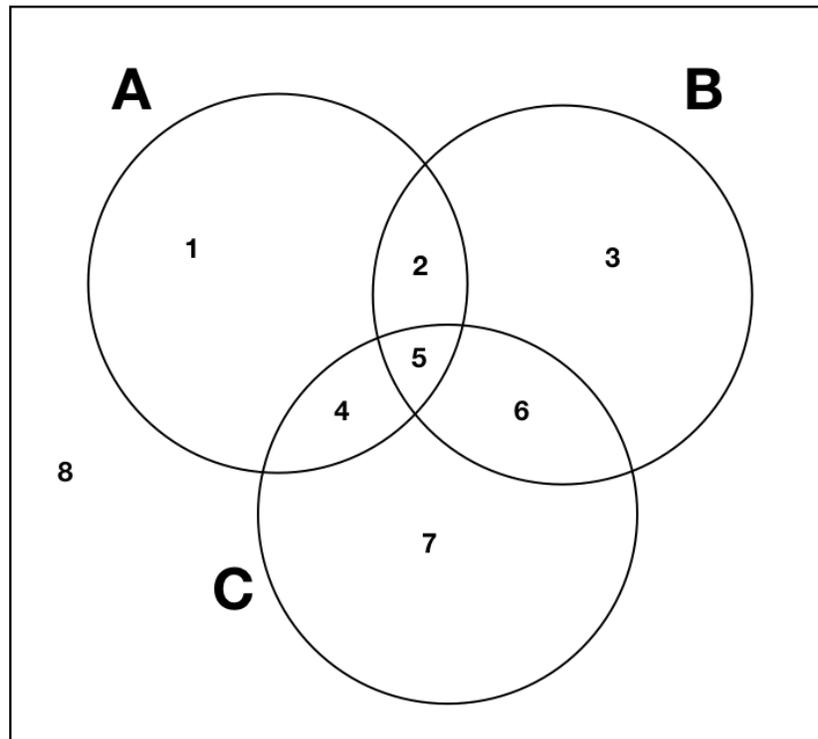
13. $n(A \cup B)$ 14. $n(A \cap B)$

Consider the following Venn Diagram of three sets.

Determine the following.

15. U 16. A

17. B 18. C

19. $A \cup B \cup C$ 20. $A \cap B \cap C$
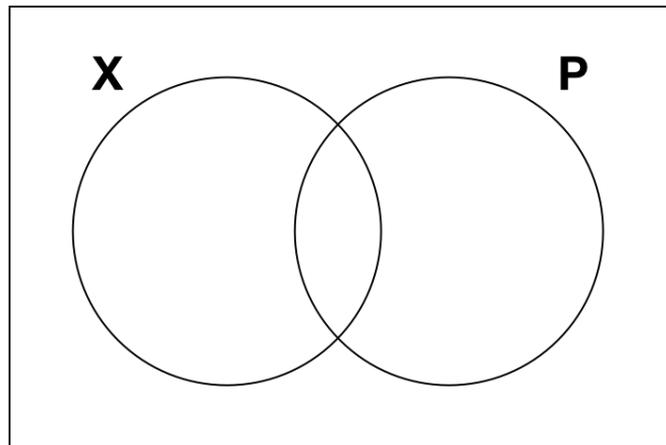
21. $A \cup C$ 22. $B \cap C$

Market Purchases- During the Black Friday Sale at Best Buy, there were 200 purchases made by customers in an hour.

105 purchased Xboxes
95 purchased Play Stations
30 purchased both

Of the purchases made, how many purchased:

X   P

23. Xboxes only?

24. Play Stations only?

25. Xboxes or Play Stations?

26. Neither of those two consoles?

Sports Fans- A survey of 350 residents was conducted regarding sports activities.

185 liked Baseball
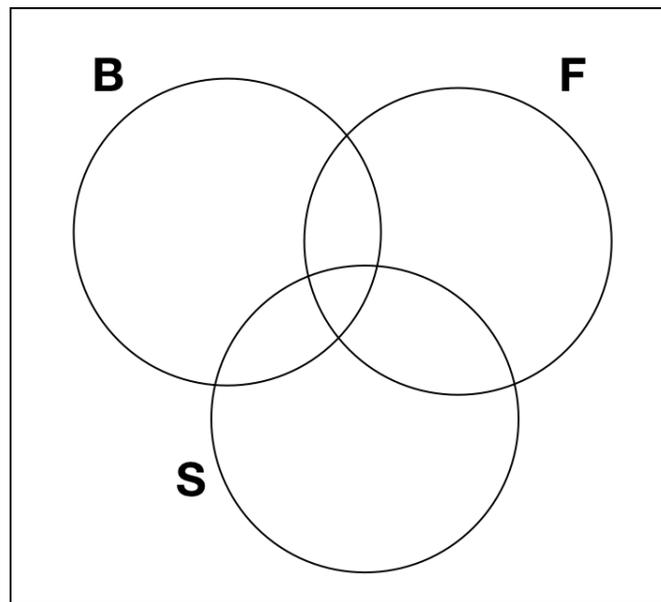140 liked Football
95 liked Soccer
52 liked Baseball and Football
38 liked Baseball and Soccer
40 liked Football and Soccer
22 liked all three sports

Of the residents surveyed, how many liked:

27. None of the sport activities?

28. Only Baseball?

29. Only Football?

30. Only Soccer?

31. Exactly one of these sports?

32. Exactly two of these sports?

33. Baseball or Football?

34. Baseball or Soccer?

Use Euler diagrams to determine whether the arguments are valid.

35. All Kangaroos are adorable
    Jimmy is adorable
   Therefore, Jimmy is a Kangaroo

36. No kids are funny
    Jimmy is a funny
    Therefore, Jimmy is not a kid

37 Some kids are funny
    Jimmy is fa kid
    Therefore, Jimmy is not funny

You pick a card from a standard deck, assume the ace is low. What's the probability of selecting a:

38. Ace?   39. Spade?

40. Ace of Spades?   41. Red Ace?

42. Card at least an 8?   43. Red card at least an 8?

44 Card no more than 5?   45. Red card no more than 5?

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46. **Pick a Card**- Mike and Dave play the following game. Mike picks a card from a standard deck. If Mike selects a King, he wins $ 35.00. If Mike does not select a King, he loses $ 3.00. Determine Mikes expected value.

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47. **New Business**- In a proposed business venture, Stephanie estimates there is a 60% Chance she will make $ 50,000 and a 40% chance she will lose $ 15,000. Determine Stephanie's Expected Value.

48. What is your name

Answer Sheet

1		25	
2		26	
3		27	
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24		48	