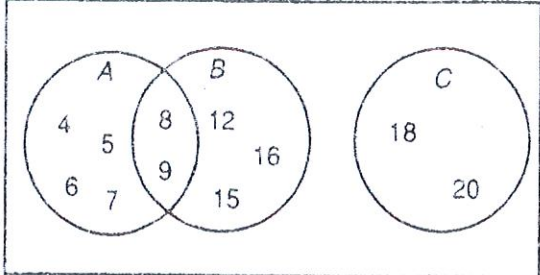


Name Key

Date _____

EXTRA PRACTICE 1-3

UNION AND INTERSECTION OF SETS



EXERCISES

Refer to the diagram. Find the set named by listing the members.

1. $A \cup B$ {4, 5, 6, 7, 8, 9, 12, 15, 16}
2. $A \cap B$ {8, 9}
3. $A \cup C$ ~~{4, 5, 6, 7, 8, 9, 12, 15, 16}~~ {4, 5, 6, 7, 8, 9, 18, 20}
4. $A \cap C$ {∅}
5. $B \cup C$ {4, 5, 6, 7, 8, 9, 12, 16, 15}
6. $B \cap C$ {8, 9}
7. $(A \cup B) \cup C$ {4, 5, 6, 7, 8, 9, 12, 15, 16, 18, 20}
8. $(A \cap C) \cup B$ {8, 9, 12, 15, 16}

Let $U = \{0, 2, 4, 6, 8, 10, 12\}$, $X = \{2, 4, 6, 8, 10\}$, $Y = \{4, 6, 8\}$, and $Z = \{2, 10\}$. Find each union or intersection.

9. X' {0, 12}
10. Y' {0, 2, 10, 12}
11. Z' {0, 4, 6, 8, 12}
12. $X \cup Y$ ~~{2, 4, 6, 8, 10}~~ {2, 4, 6, 8, 10}
13. $Y \cap Z$ {∅}
14. $(X \cup Y)'$ {0, 12}
15. $X' \cup Y'$ {0, 2, 10, 12}
16. $(X \cap Y)'$ {0, 2, 10, 12}
17. $Y' \cap Z'$ {0, 12}
18. $(X \cup Z)'$ {4, 6, 8, 0, 12}
19. $(X \cup Y) \cap Z$ {2, 10}
20. $(X \cup Z) \cap Y$ {4, 6, 8}