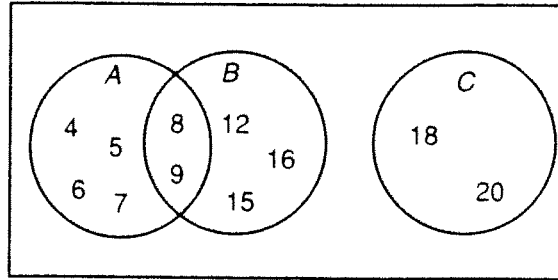


EXTRA PRACTICE 1-3

UNION AND INTERSECTION OF SETS



EXERCISES

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

1. $A \cup B$ _____
2. $A \cap B$ _____
3. $A \cup C$ _____
4. $A \cap C$ _____
5. $B \cup C$ _____
6. $B \cap C$ _____
7. $(A \cup B) \cup C$ _____
8. $(A \cap C) \cup B$ _____

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.

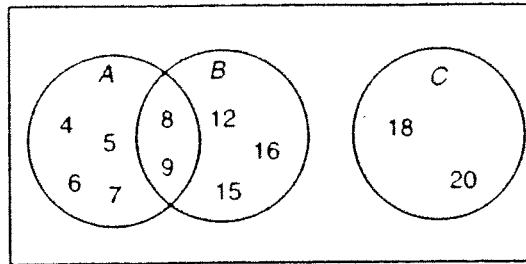
- | | |
|-------------------------------|-------------------------------|
| 9. X' _____ | 10. Y' _____ |
| 11. Z' _____ | 12. $X \cup Y$ _____ |
| 13. $Y \cap Z$ _____ | 14. $(X \cup Y)'$ _____ |
| 15. $X' \cup Y'$ _____ | 16. $(X \cap Y)'$ _____ |
| 17. $Y' \cap Z'$ _____ | 18. $(X \cup Z)'$ _____ |
| 19. $(X \cup Y) \cap Z$ _____ | 20. $(X \cup Z) \cap Y$ _____ |

Name _____

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, 18, 20}**
4. $A \cap C$ **\emptyset**
5. $B \cup C$ **{8, 9, 12, 15, 16, 18, 20}**
6. $B \cap C$ **\emptyset**
7. $(A \cup B) \cup C$ **{4, 5, 6, 7, 8, 9, 12, 15, 16, 18, 20}**
8. $(A \cap B) \cup C$ **{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' | <u>{0, 12}</u> | 10. Y' | <u>{0, 2, 10, 12}</u> |
| 11. Z' | <u>{0, 4, 6, 8, 12}</u> | 12. $X \cup Y$ | <u>{2, 4, 6, 8, 10}</u> |
| 13. $Y \cap Z$ | <u>\emptyset</u> | 14. $(X \cup Y)'$ | <u>{0, 12}</u> |
| 15. $X' \cup Y'$ | <u>{0, 2, 10, 12}</u> | 16. $(X \cap Y)'$ | <u>{0, 2, 10, 12}</u> |
| 17. $Y' \cap Z'$ | <u>{0, 12}</u> | 18. $(X \cup Z)'$ | <u>{0, 12}</u> |
| 19. $(X \cup Y) \cap Z$ | <u>{2, 10}</u> | 20. $(X \cup Z) \cap Y$ | <u>{4, 6, 8}</u> |