

Union and Intersection of Sets Assignment

Find each union or intersection.

Let $A = \{2, 4, 6, 8\}$, $B = \{x | x \text{ is a positive even integer less than } 13\} = \{2, 4, 6, 8, 10, 12\}$, $C = \{1, 4, 7, 10, 13\}$, and $D = \{x | x \text{ is a prime number less than } 16\} = \{2, 3, 5, 7, 11, 13\}$.

1. $A \cup B$

2. $A \cup C$

3. $A \cup D$

4. $B \cup C$

5. $B \cup D$

6. $C \cup D$

7. $A \cap B$

8. $A \cap C$

9. $A \cap D$

10. $B \cap C$

11. $B \cap D$

12. $C \cap D$

Solve each inequality. Write the solutions as either the union or intersection of two sets.

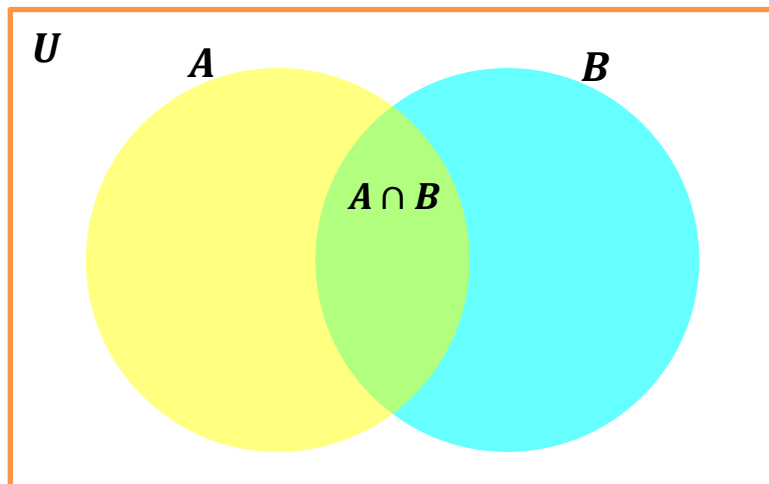
13. $|x + 7| \leq 11$

14. $|3x + 8| \geq 17$

15. $2(5x + 13) - 5.7 < 30.3x < 0$

Draw a Venn diagram to represent the union and intersection of these sets.

16. Let $A = \{2, 7, 12, 17\}$ and $B = \{x | x \text{ is a positive whole number less than } 8\}$. Find $A \cap B$.



Name: _____ Period: _____ Date: _____

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17. Let $X = \{8, 9, 11, 13\}$, $Y = \{7, 8, 9, 10\}$ and $Z = \{-5, 5, 7, 9, 11\}$. Find $X \cap Y \cap Z$.

