

Given: $A = \{1, 2\}$, $B = \{2, 4, 6\}$, $C = \{1, 3, 5, 7\}$ and $U = \{1, 2, 3, \dots, 10\}$

1. Find $A' = \{3, 4, 5, 6, 7, 8, 9, 10\}$ 2. $|C| = 4$ $|B \cup C| =$
3. $C \cup A = \{1, 2, 3, 5, 7\}$ 4. $A \cap B = \{2\}$
5. $A' \cap C = \{3, 5, 7\}$ 6. $A \oplus C = \{2, 3, 5, 7\}$
7. $B - A = \{4, 6\}$ 8. $|B \cup C| = 7$

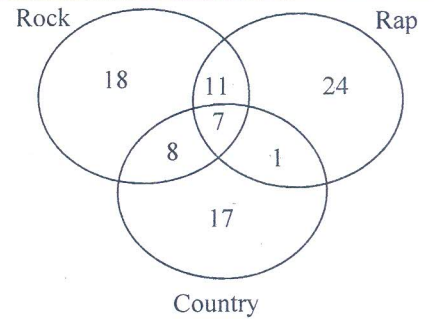
Given: $A = \{1, 4\}$, $B = \{2, 4, 6\}$, $C = \{1, 3, 5\}$ and $U = \{0, 1, 2, 3, \dots, 10\}$

True or False. If false explain why.

9. $2 \in A - B$ False $2 \in B - A$ $B \cup C = \{1, 2, 3, 4, 5, 6\}$
10. A and C are disjoint. False $A \cap C = 1$
11. $4 \in A \cap B$ True
12. $A \oplus B = \{1, 2, 6\}$ True
13. $B \cup C = U - \{0, 7, 8, 9, 10\}$ True

Use the Venn Diagram to answer the following questions.

14. How many total people are represented in the diagram? 86
15. How many people like country? 33
16. How many people like Rock and Country? 15



Use the following information to fill in the Venn Diagram below.

17. 100 people were asked if they liked Math, Science, or Social Studies.

- 54 like Math
- 42 like Science
- 32 like Social Studies
- 18 like Math and Science
- 10 like Science and Social Studies
- 12 like Math and Social Studies
- 6 like all three subjects

