Quiz 9

1. If A has 31 proper subsets, how many elements are in A?

2. Let \( U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\} \), \( A = \{1, 2, 3, 4, 5\} \), \( B = \{2, 4, 6, 8\} \), \( C = \{3, 4, 7, 9\} \)
   Find:
   \( (B - A)^c \)
   \( A \cap C^c \)
   \( B \cup B^c \)

3. Draw a Venn Diagram of \( C - (A^c \cap B) \)

Answers:
1. A has 5 elements since the power set has \( 2^5 = 32 \) elements.
2. a. \( \{1, 2, 3, 4, 5, 7, 9, 10\} \)
b. \( \{1, 2, 5\} \)
c. U
3.