

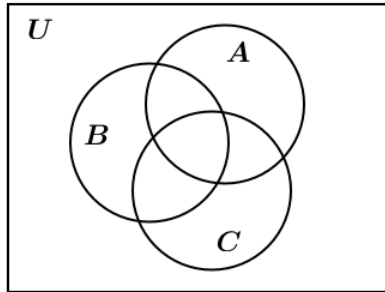
Math 221: Venn Diagram Worksheet

Let

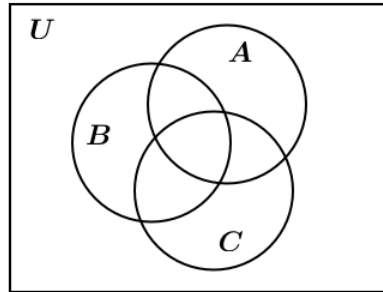
$$A = \{1, 2, 4, 8\}, \quad B = \{2, 4, 6, 8, 10\}, \quad C = \{2, 3, 5, 7\} \quad \text{and} \quad U = \{x \in \mathbb{Z} \mid 1 \leq x \leq 10\}.$$

Compute and use the figures below to illustrate each of the following:

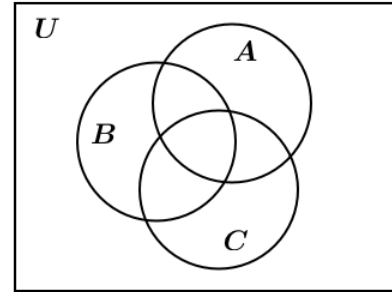
$$A \cup B, \quad A \cap B, \quad A \cup B \cup C, \quad B - C, \quad \overline{C}, \quad (A \cup B) - C, \quad A \cup (B - C) \quad \text{and} \quad A - (B \cup C).$$



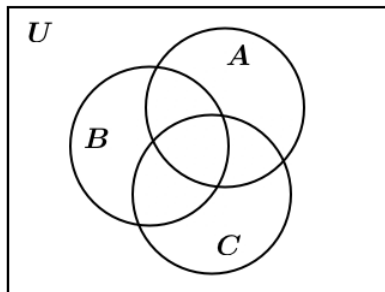
$$A \cup B$$



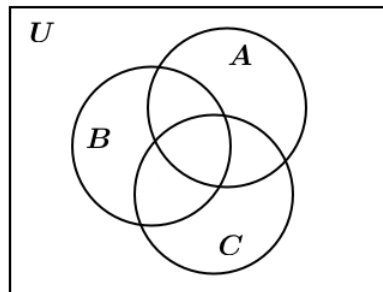
$$A \cap B$$



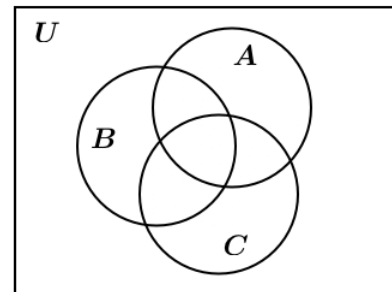
$$A \cup B \cup C$$



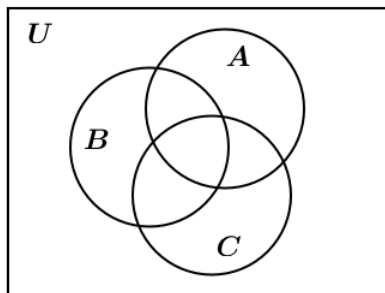
$$B - C$$



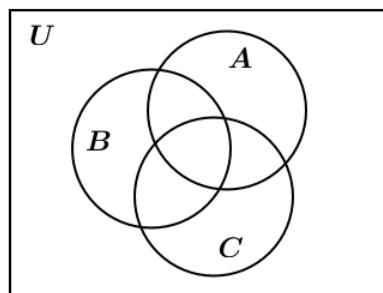
$$\overline{C}$$



$$(A \cup B) - C$$



$$A \cup (B - C)$$



$$A - (B \cup C)$$