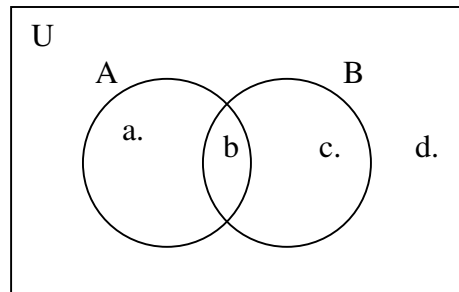


Sets

1. If $A = \{1, 2, 3, 4\}$ and $B = \{4, 5, 6\}$, find $A \cup B$.
2. If $A = \{1, 2, 3, 4\}$ and $B = \{4, 5, 6\}$, find $A \cap B$.
3. If $A = \{2, 4, 6, 8\}$ and $B = \{4, 8\}$, find $A \cup B$.
4. If $A = \{a, b, c, d\}$ and $B = \{1, 2, 3, 4\}$, find $A \cap B$.
5. Form the intersection and union of the following sets:
 - a. $R = \{5, 10, 15\}$, $T = \{15, 20\}$
 - b. $M = \{1, 2, 3\}$, $N = \{101, 102, 103, 104\}$
 - c. $A = \{0, 10, 100, 1000\}$, $B = \{10, 100\}$
 - d. $G = \{\text{odd counting numbers less than } 100\}$, $H = \{\text{even counting numbers between } 1 \text{ and } 31\}$
 - e. $A = \{x, y, z, t\}$, $B = \{x, y, r, s\}$
6. Using sets A and B, describe the elements in regions a-d in the figure below:



7. Draw a Venn diagram that represents the following sets:
 - a. $A \cup B$
 - b. $(A \cap B) \cup C$
 - c. $B \subseteq A \not\subseteq C$
8. Given $A = \{5, 6, 7, 8\}$, list all of the subsets of A .
9. Shade a portion of the diagram that illustrates each of the following sets:
 - a. $A \cap B$
 - b. $A' \cap B$
 - c. $A' \cup B'$

