

If $U = \{a, b, c, d, e, f, g\}$, $A = \{d, e, f\}$, and $B = \{a, b, c, d, e\}$, find each of the following.

1. $A \cup B$

2. $A \cap B$

3. $A - B$

4. $B - A$

5. $\sim A$

6. $\sim(A \cap B)$