



1. Use the above sets to answer the following:

a. $(A \cap B) \cup C$

b. $A \cap (B \cup C)$

c. $\sim A$

d. $(C \cap B)'$

e. $(A \cup C) \cap \overline{(A \cup B)}$

2. Set $H\{2, 3, 5, 1, 7, 13, 10\}$, $L\{2, 3, 5, 7, 11, 13, 17, 19, 23, 29\}$, $K\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 26\}$

a. $(H \cap L)$

b. $H \cap (L \cup K)$

c. $\overline{(L \cup K)}$

Identify if the following are mutually exclusive or not.

- Rolling a die and getting a 3 and a 4.
- Picking an Ace and a Heart in one drawing from a deck of cards.
- Having Instagram and snapchat on an iPhone.
- Picking a 5 and a 10 in one drawing from a deck of cards.
- Standing outside and getting struck by lightning.