Exercise 45

Sets Find the indicated set if

$$A = \{x \mid x \geq -2\} \qquad B = \{x \mid x < 4\}$$

$$C = \{x \mid -1 < x \leq 5\}$$

(a) $B \cup C$ **(b)** $B \cap C$

Solution

The union of B and C ($B \cup C$) is the combination of elements in both, whereas the intersection of B and C ($B \cap C$) is only the elements they have in common.

$$B \cup C = \{x \mid x \leq 5\}$$

$$B \cap C = \{x \mid -1 < x < 4\}$$