## Exercise 42

Sets Find the indicated set if

$$
A=\{1,2,3,4,5,6,7\} \quad B=\{2,4,6,8\} \quad C=\{7,8,9,10\}
$$

(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.

$$
\begin{aligned}
& B \cup C=\{2,4,6,7,8,9,10\} \\
& B \cap C=\{8\}
\end{aligned}
$$

