

**Definition 3.42.** [23S] Other operators between sets are:

- the difference

$$A \setminus B \stackrel{\text{def}}{=} \{x \in A : x \notin B\} \quad ;$$

- if the set  $A$  is clearly specified by the context, and if  $B \subseteq A$ , it is common to write  $B^c \stackrel{\text{def}}{=} A \setminus B$ ;  $B^c$  is said to be the complement of  $B$  in  $A$ ;
- the symmetric difference

$$A \Delta B \stackrel{\text{def}}{=} (A \cup B) \setminus (A \cap B) = (A \setminus B) \cup (B \setminus A) = \{x \in A \cup B : x \in A \leftrightarrow x \in B\}$$

where  $A, B$  are sets.