

Set definitions

Janet Davis, from VanDrunen (2013), sections 1.4, 1.9, 4.2, 4.3

October 9, 2017

Union	$A \cup B$	=	$\{x \mid x \in A \vee x \in B\}$
Intersection	$A \cap B$	=	$\{x \mid x \in A \wedge x \in B\}$
Difference	$A - B$	=	$\{x \mid x \in A \wedge x \notin B\}$
Complement	\overline{X}	=	$\{x \in \mathcal{U} \mid x \notin X\}$
Cartesian product	$X \times Y$	=	$\{(x, y) \mid x \in X \wedge y \in Y\}$
Subset	$A \subseteq B$	if	$\forall x \in A, x \in B$
Set equality	$A = B$	if	$A \subseteq B \wedge B \subseteq A$