

Discrete Mathematics

Sets and Functions

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Sets and Subsets

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- › The empty set \emptyset , $\emptyset = \{ \}$.

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- › **Commonly used sets.**
 - Natural numbers N
 - Integers Z
 - Rational numbers Q
 - Real numbers R

Denoting Sets by Descriptions

Sets can also be denoted by descriptions in the form

$$A = \{x \in S : P(x)\}$$

Examples.

1. $E = \{x \in \mathbf{N} : x = 2m \text{ for some } m \in \mathbf{N}\}$
2. $A = \{x \in \mathbf{R} : x \geq 1.9\}$