

$$\mathbb{N} = \{0, 1, 2, 3, \dots\}$$

$$\mathbb{Z} = \{\dots, -1, -2, 0, 1, 2, \dots\}$$

$$\mathbb{Q} = \{\text{fractions}, p/q, p, q \in \mathbb{Z}\}$$

$$\mathbb{R} = \{\text{real numbers}\}.$$

$$\text{e.g. } \{x \in \mathbb{R} \mid x^2 \leq 4\} \Rightarrow x \in [-2, 2].$$

$$\{x \in \mathbb{Z} \mid x^2 \leq 4\} \Rightarrow x \in \{-2, -1, 0, 1, 2\}.$$