Worksheet §1.1-1.2

1. Write the following sets in set-roster notation or interval notation, whichever is appropriate.

   (a) $\{x \in \mathbb{Z} : 3 \leq x < 7\}$

   (b) $\{3x + 1 : 3 \leq x < 7 \text{ and } x \in \mathbb{Z}\}$

   (c) $\{x \in \mathbb{R} : 3 \leq x < 7\}$

   (d) $\{2x + 1 : 3 \leq x < 7 \text{ and } x \in \mathbb{R}\}$

2. Describe the set $\{\ldots, -7, -3, 1, 5, 9, \ldots\}$ in set-builder notation.

3. Describe the set $\{2, 3, 5, 9, 17, 33, \ldots\}$ in set-builder notation.

4. Compute $\#\{\varnothing, \{\varnothing\}\}$.