I. Real Numbers & Their Subsets:

A. \( \mathbb{N} = \{ 1, 2, 3, \ldots \} \)  
   Natural Numbers \((a.k.a.\) counting #'s\))

B. \( \mathbb{W} = \{ 0, 1, 2, 3, \ldots \} \)  
   Whole Numbers \((\mathbb{N} \text{ w/} 0 \text{ included})\)

C. \( \mathbb{Z} = \{ \ldots, -3, -2, -1, 0, 1, 2, 3, \ldots \} \)  
   Integers \(\Rightarrow\) most important set

D. \( \mathbb{Q} = \{ \frac{a}{b} \mid a \in \mathbb{Z}, b \in \mathbb{Z} \text{ & } b \neq 0 \} \)  
   Rational Numbers \((i.e.,\) fractions\))

   \(\text{e.g. } \frac{1}{2} = \quad \& \quad -\frac{1}{3} = \quad \)
   thus (also)...  
   \(\mathbb{Q} = \{ x \mid x \text{ is a repeating or terminating decimal} \} \)
E. \( \mathbb{I} = \{ x \mid x \text{ is a non-repeating AND non-terminating decimal} \} \)

Irrational Numbers, e.g. ___, ___, ___

F. \( \mathbb{R} = \mathbb{Q} \cup \mathbb{I} \)

II. Symbols & Terminology:

\( \in, \notin, \subset, \varsubsetneq, \cup, \cap, \emptyset, \{ \} \)

A. is an element of, is not an element of

B. is a subset of, is not a subset of

C. union, intersection

D. null set, empty set

exact same thing, a set with NOTHING in it
III. Examples (p.17): Exercises #41-52

HW: Read pp.2-4 (section R.1)
    Read pp.8-17 (section R.2)
p.18 / Exercises #53-67 (odd)?