The empty set 1

- If a set has zero elements, it is called the empty (or null) set
  - Written using the symbol $\varnothing$
  - Thus, $\varnothing = \{\}$ ← **VERY IMPORTANT**
  - If you get confused about the empty set in a problem, try replacing $\varnothing$ by $\{\}$

- As the empty set is a set, it can be a element of other sets
  - $\{\varnothing, 1, 2, 3, x\}$ is a valid set