

**Definition 1.** A *system of countably infinite sets* is a system of sets  $X$  such that every element of  $X$  is countably infinite.

**Definition 2.** A *system of countable sets* is a system of sets  $X$  such that every element of  $X$  is countable.

**Definition 3.** A *system of uncountable sets* is a system of sets  $X$  such that every element of  $X$  is uncountable.