

**Definition 3.170.** *[24X]* Given  $x$  the **successor** is defined as

$$S(x) \stackrel{\text{def}}{=} x \cup \{x\} \quad . \quad (3.171)$$

We will often write  $Sx$  instead  $S(x)$  to ease notations.

We say that a set  $A$  is **S-saturated** if  $\emptyset \in A$  and if for every  $x \in A$  you have  $S(x) \in A$ . <sup>a</sup>

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<sup>a</sup>In [11] such set is called *inductive*.