

### 0.0.1 Timeunit To Number of Seconds

The operation  $timeunit \rightarrow seconds$  will return the number of seconds corresponding to the input  $Timeunit$

$$Timeunit ::= second \mid minute \mid hour \mid day \mid week \mid month \mid year$$

such that the following schema defines  $timeunit \rightarrow second$

$toSeconds[Timeunit]$ $timeunit? : Timeunit$ $timeunit \rightarrow seconds : Timeunit \rightarrow \mathbb{N}$	<hr/>
$timeunit \rightarrow seconds(timeunit?) = 1 \iff timeunit? = second$ $timeunit \rightarrow seconds(timeunit?) = 60 \iff timeunit? = minute$ $timeunit \rightarrow seconds(timeunit?) = 3600 \iff timeunit? = hour$ $timeunit \rightarrow seconds(timeunit?) = 86400 \iff timeunit? = day$ $timeunit \rightarrow seconds(timeunit?) = 604800 \iff timeunit? = week$ $timeunit \rightarrow seconds(timeunit?) = 2629743 \iff timeunit? = month$ $timeunit \rightarrow seconds(timeunit?) = 31556926 \iff timeunit? = year$	<hr/>