

$\mathbb{Z}R(3)$

We need to go from

$0 \rightarrow x$  in one step

and from  $x \rightarrow 1$  in the next

Similarly we go from

$n \rightarrow n+x$

and  $n+x$  to  $n+1$ .

We need a symbol to specify  $x$ . Let  $x = \frac{1}{2}$ .

Then  $\mathbb{Z}_{(2)} = \mathbb{Z} \cup \{n + \frac{1}{2} : n \in \mathbb{Z}\}$

We can put an