## Why does this work?

- Ok, so we know P(1) is true.
- Now  $P(1) \implies P(2)$ , so P(2) is true.
- $P(2) \implies P(3)$ , so P(3) is true.
- And with n steps, we can establish P(n) is true.

This can get us anywhere ... but it kind of feels like we need "infinitely many" steps to get to all of  $\mathbb{N}$ . Is this ok?