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CSE150  
HW02b

**Problem 5**

Show that each function  $f : \mathbb{N} \rightarrow \mathbb{N}$  has the listed properties.

1.  $f(x) = 2x$  (one-to-one but not onto)
2.  $f(x) = x + 1$  (one-to-one but not onto)
3.  $f(x) = \text{if } x \text{ is odd then } x - 1 \text{ else } x + 1$  (bijective)