

- Find the inverse of $f(x) = 2x + 1$.

① f IS A LINEAR FUNCTION. ITS DOMAIN IS $(-\infty, \infty)$

AND ITS GRAPH IS A LINE WITH SLOPE 2.

THE GRAPH PASSES THE HORIZONTAL LINE TEST.

f IS ONE-TO-ONE.

② $y = 2x + 1$ SOLVE FOR $x \dots$

$$y - 1 = 2x$$

$$\frac{y-1}{2} = x$$

③ $\frac{y-1}{2} = x$ INTERCHANGE x & $y \dots$

$$\frac{x-1}{2} = y$$

$$\boxed{f^{-1}(x) = \frac{x-1}{2}}$$

④ THE RANGE OF f
IS $(-\infty, \infty)$. SO THE DOMAIN OF f^{-1} IS $(-\infty, \infty)$.