

① a) A ONE-TO-ONE FUNCTION IS A FUNCTION THAT NEVER TAKES ON THE SAME VALUE TWICE.
 $f(x_1) \neq f(x_2)$ WHENEVER $x_1 \neq x_2$

b) A FUNCTION IS ONE-TO-ONE IF AND ONLY IF (iff) NO HORIZONTAL LINE INTERSECTS THE GRAPH MORE THAN ONCE.

③ FUNCTION IS NOT ONE-TO-ONE

④ FUNCTION IS ONE-TO-ONE

⑥ FUNCTION IS NOT ONE-TO-ONE

⑦ FUNCTION IS NOT ONE-TO-ONE

⑩ $f(x) = 10 - 3x$ IS ONE-TO-ONE

⑧ a) PASSES THE HORIZONTAL LINE TEST

b) D of $f^{-1}(x)$ $D = [-1, 3]$
 \equiv of $f^{-1}(x)$ $\equiv [-3, 3]$

c) $f^{-1}(2) = 0$

d) $f^{-1}(0) \approx -1.75$

$$(19) C = \frac{5}{9}(F - 32)$$

$$\frac{9}{5}C = F - 32$$

$$F = \frac{9}{5}C + 32$$

FAHRENHEIT AS A FUNCTION OF CELSIUS TEMPERATURE

$$F > -459.67$$

$$\frac{9}{5}C + 32 > -459.67$$

$$\frac{9}{5}C > -491.67$$

$$C > -273.15$$

DOMAIN

$$D = C > -273.15$$

(21)

$$f(x) = \sqrt{10 - 3x}$$

$$y = \sqrt{10 - 3x}$$

$$y^2 = 10 - 3x$$

$$-3x = y^2 - 10$$

$$x = \frac{10 - y^2}{3}$$

$$f^{-1}(x) = \frac{10 - x^2}{3}$$

(30)

