

ex. EVALUATE $y = 3x - 5$
FOR y WHEN x IS
EQUAL TO 2

$$y = 3(2) - 5$$

$$= 6 - 5$$

$$= 1$$

ex: $f(x) = 3x - 5$

$$f(2) = 3(2) - 5$$

$$= 6 - 5$$

$$= 1$$

12. $g(x) = x^2 - 5x - 2$

a) $g(\underline{-3}) = (\underline{-3})^2 - 5(\underline{-3}) - 2$

$$= 9 + 15 - 2$$

$$= 24 - 2$$

$$= 22$$

b) $g(\underline{x+4}) = (\underline{x+4})^2 - 5(\underline{x+4}) - 2$

$$= (x+4)(x+4) - 5x - 20 - 2$$

$$= x^2 + 4x + 4x + 16 - 5x - 22$$

$$= x^2 + 3x - 6$$

c) $g(\underline{-x}) = (\underline{-x})^2 - 5(\underline{-x}) - 2$

$$= x^2 + 5x - 2$$

13. $f(x) = \frac{x}{|x|}$

$$f(\underline{r^2}) = \frac{(r^2)}{|(r^2)|}$$

$$= \frac{r^2}{|r^2|}$$

$$= \frac{r^2}{r^2}$$

$$= 1$$

$$\frac{(-2)^2}{|(-2)^2|}$$

$$= \frac{4}{4}$$

$$= 1$$

VERTICAL LINE TEST

IF ANY VERTICAL LINE
INTERSECTS THE GRAPH
AT 2 OR MORE

PLACES, IT IS NOT
A FUNCTION

#14



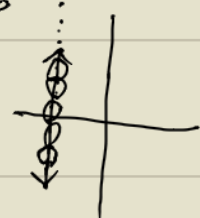
NOT A
FUNC.

#15



FUNC.

#16



NOT A FUNC.

POINT: $f(x) = 5x$

$$f(\underline{3}) = \underline{7}$$

\downarrow \downarrow
 x y