E.g. $h(x) = -7$

$h(2) = -7$; $h(2018) = -7$

$h(-2018) = -7$

E.g. $f(x) = x^2 - 3x$ $\longrightarrow$ $(\quad)^2 - 3(\quad)$

Find $f(1)$; $f(-1)$ and $f(2a)$

$f(1) = (1)^2 - 3(1) = 1 - 3 = \boxed{-2}$

$f(-1) = (-1)^2 - 3(-1) = 1 + 3 = \boxed{4}$

$f(2a) = (2a)^2 - 3(2a)$

$= \boxed{4a^2 - 6a}$

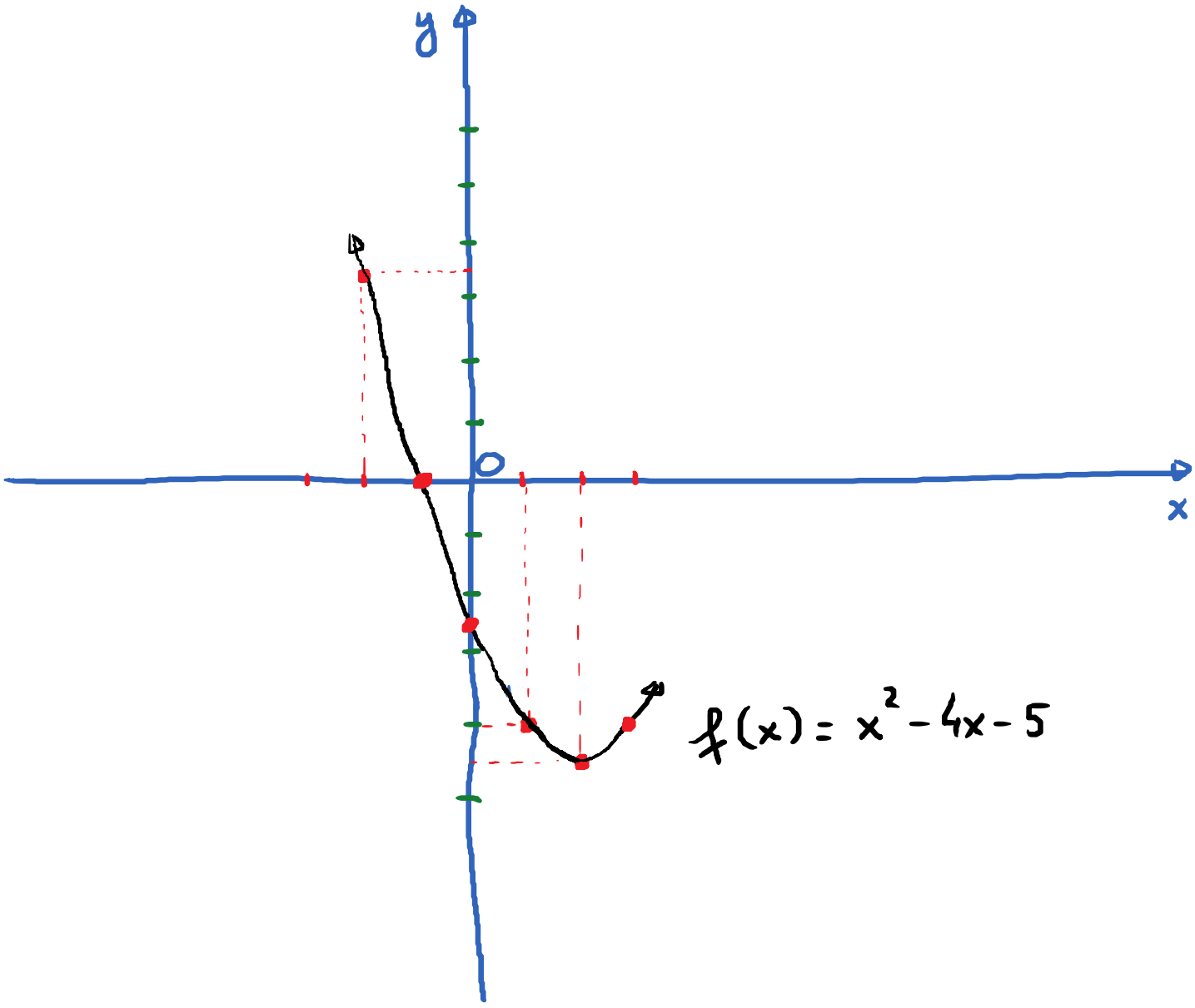
(3) Graphs of Function.

(x, y)

To graph a function, we find ordered pairs $(x, f(x))$, then we plot them and sketch a graph through the points.

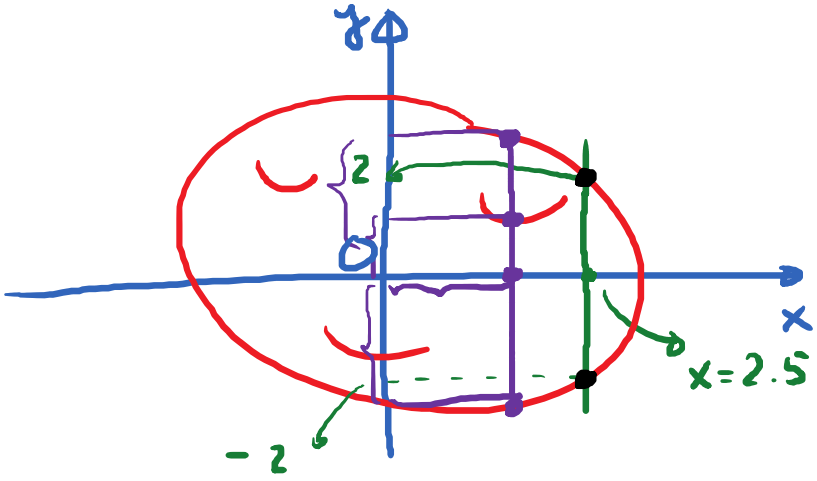
E.g. $f(x) = x^2 - 4x - 5$

x	$y = f(x) = x^2 - 4x - 5$	
-2	7	$\rightarrow (-2, 7)$
-1	0	$\rightarrow (-1, 0)$
0	-5	$\rightarrow (0, -5)$
1	-8	$\rightarrow (1, -8)$
2	-9	$\rightarrow (2, -9)$
3	-8	$\rightarrow (3, -8)$



(4) The Vertical-Line Test.

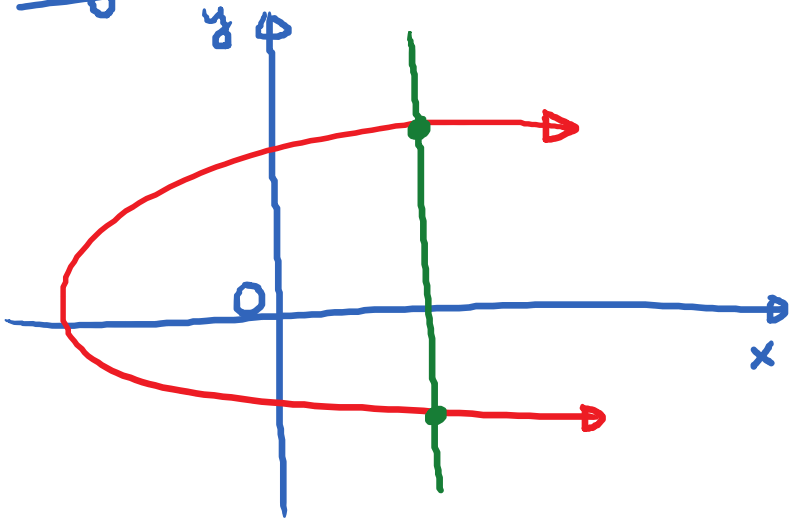
E.g.



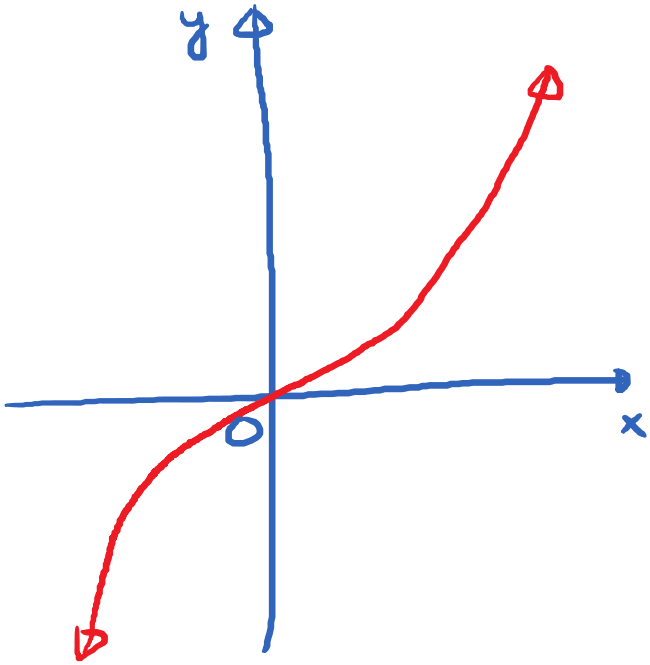
The Vertical-line Test:

If it is possible to draw a vertical line that intersects a graph more than once, then the graph is NOT the graph of a function.

E.g.



Not a graph of a function



graph of a function.

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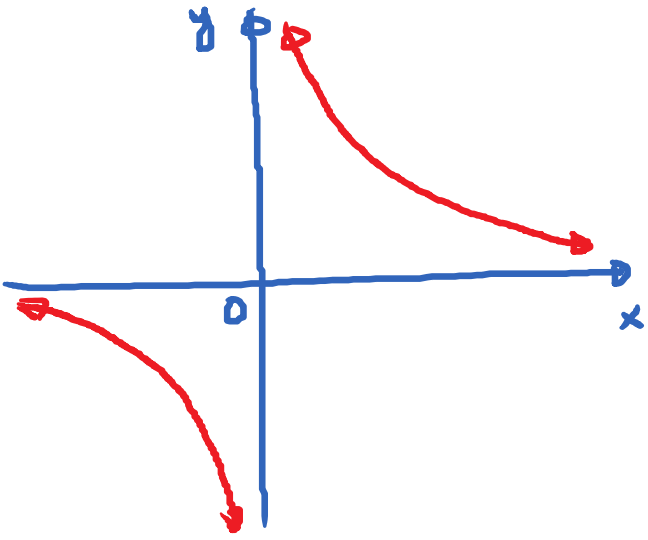
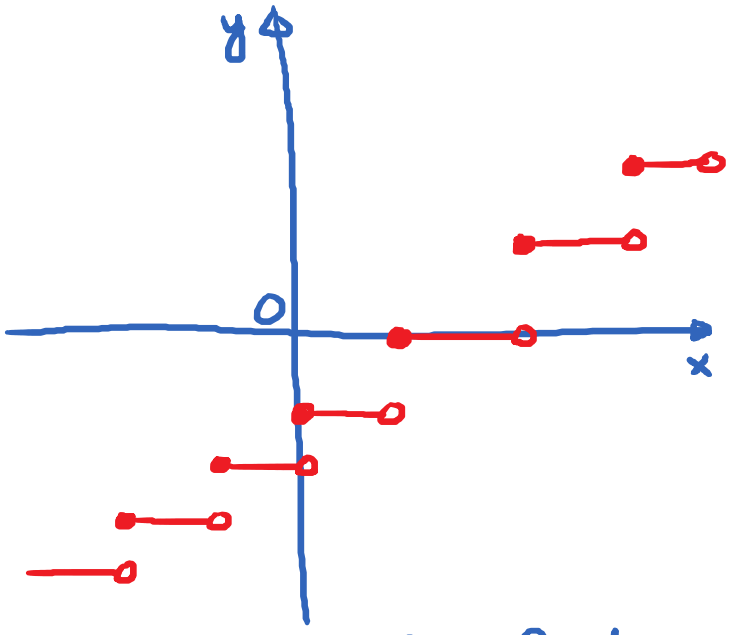


graph of a function



graph of a function.