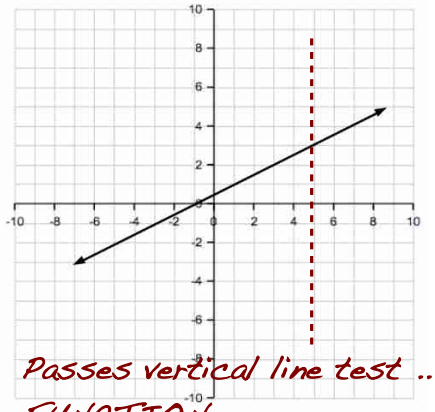
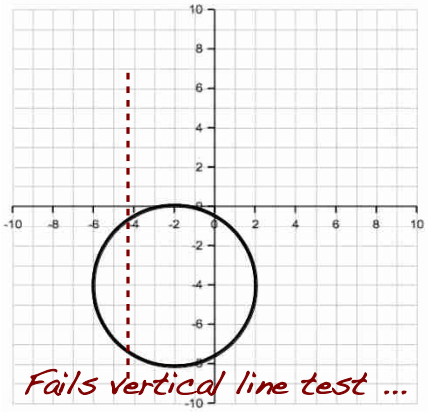
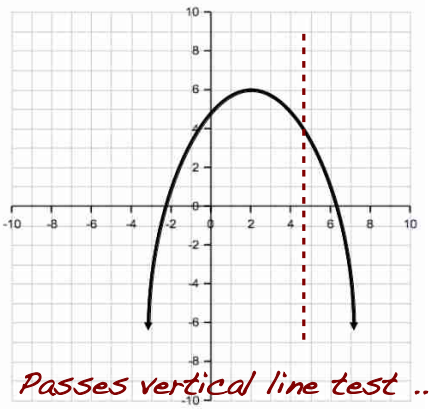
Determine whether or not each of these relations are "functions":



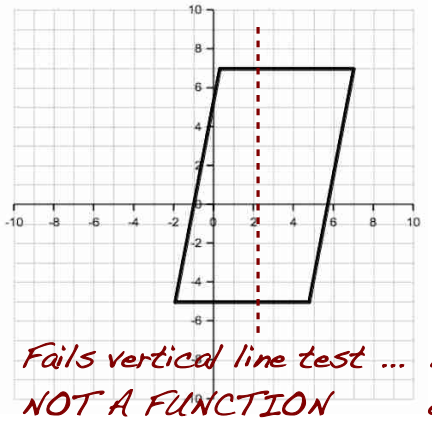
Passes vertical line test ... FUNCTION



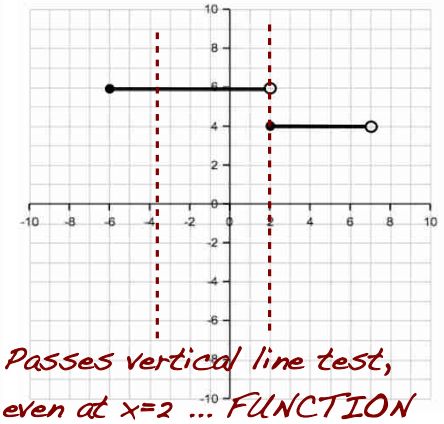
Fails vertical line test ... NOT A FUNCTION



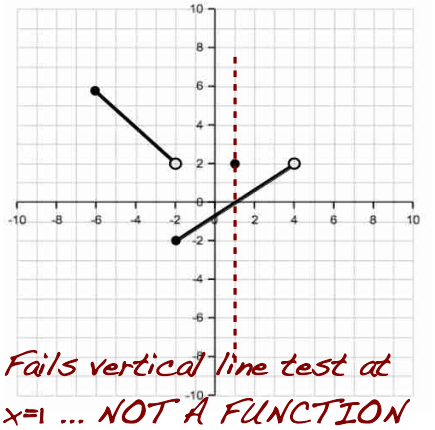
Passes vertical line test ... FUNCTION



Fails vertical line test ... NOT A FUNCTION



Passes vertical line test, even at x=2 ... FUNCTION



Fails vertical line test at x=1 ... NOT A FUNCTION

Evaluate each of the following, given that $f(x)=x^2-4$, $g(x)=\frac{1}{x}+2$ and $h(x)=\sqrt{4x-4}$

a) $f(2)$

$= (2)^2-4$

$= 4 - 4$

$= 0$

b) $h(5)$

$=\sqrt{4(5)-4}$

$=\sqrt{20-4}$

$=\sqrt{16}$

$=4$

c) $g(-\frac{1}{2})+f(1)$

$=\frac{1}{(-0.5)}+(1)^2-4$

$=-2+1-4$

$=-5$

Are each of the following relations "functions"?

a) $y=-4(x+2)^2-7$

This is a parabola ... FUNCTION

b) $y=\pm\sqrt{x}$

Each value of x gives TWO values for y (positive and negative) ... NOT A FUNCTION

c) $y=-\frac{2}{3}x-11$

This is the equation of a line ... FUNCTION