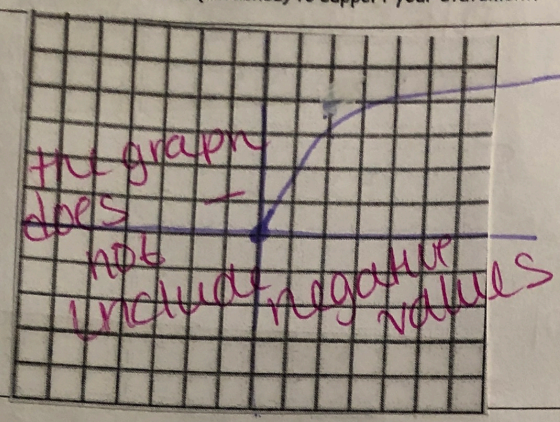
$y = \sqrt{x}$ Graph the given function. Investigate the function by making a summary statement (claim) and providing three mathematical reasons (evidence) to support your statement.



Claim:
The graph will never have negative x-values

$y = \sqrt{4} = 2$

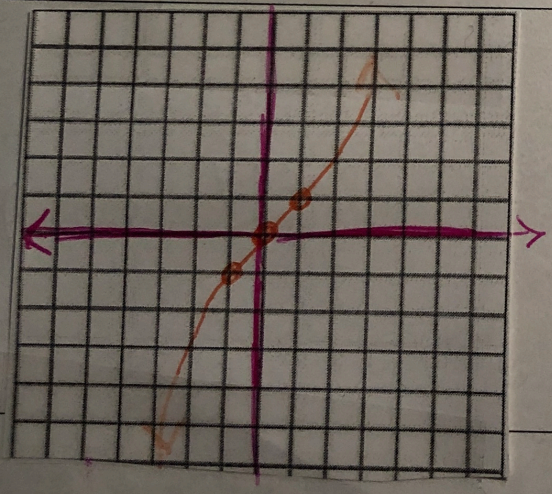
$y = \sqrt{16} = 4$

$y = \sqrt{-4}$ = No Real Solution

x	y
$(-2)(-2) = 4$ so $\sqrt{4}$ is -2	$(2)(2) = 4$ so $\sqrt{4}$ is 2

$(-2)(+2)$ is -4 → there is no $\sqrt{-4}$ | No negative x-values

$y = x^3$ Graph the given function. Investigate the function by making a summary statement (claim) and providing three mathematical reasons (evidence) to support your statement.



The domain & Range values can be both positive & negative.

x	y
1	1
(-1)	-1
2	8
-2	-8

x-values can be + & −

y-values can be + and −

$(2)^3 = 8$

$(-2)^3 = -8$

$(5)^3 = 125$

$(-5)^3 = -125$