

Graphic Organizer: RADICAL FUNCTION

x	y
0	0
1	1
2	1.4
4	2
9	3

Range: $[0, \infty)$

Domain: $[0, \infty)$ $x \geq 0$

x – intercepts (zeros): $(0, 0)$

y-intercepts: $(0, 0)$

Interval increase: $(0, \infty)$

Interval decrease: none

End behavior: $x \rightarrow \infty, f(x) \rightarrow \infty$

min or max: $\min \rightarrow (0, 0)$

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Example 2:

Fill in the missing information: $f(x) = \sqrt{x-1} + 2$

1) Make a table of values ($x = -3, -2, -1, 0, 1, 2, 3$)

x	1	2	3
y	2	3	3.4

2) Graph the points:

x-intercepts: none

y-intercepts: none

Domain: $[1, \infty)$

Range: $[2, \infty)$

Interval increase x : $(1, \infty)$

Interval decrease: none

End behavior: $x \rightarrow \infty, f(x) \rightarrow \infty$

min or max: $\min \rightarrow (1, 2)$

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Example 3:

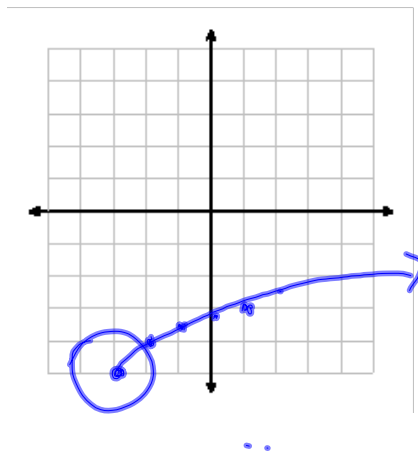
Fill in the missing information: $f(x)=$

$$f(x) = \sqrt{x+3} - 5$$

1) Make a table of values ($x = -3, -2, -1, 0, 1, 2, 3$)

x	-3	-2	-1	0	1	2
y	-5	-4	-3.6	-3.3	-3	-2.7

2) Graph the points:



x-intercepts:

$$(22, 0)$$

y-intercepts:

$$(0, -3.3)$$

Domain:

$$[-3, \infty)$$

Range:

$$[-5, \infty)$$

Interval increase

$$(-3, \infty)$$

Interval decrease

none

End behavior:

$$x \rightarrow \infty, f(x) \rightarrow \infty$$

min or max: $(-3, -5)$

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