Name: Key Date

REVIEW 10.1-10.2

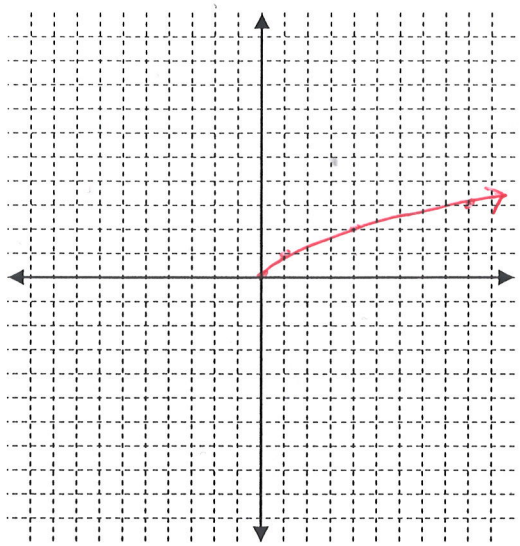
10.1- Square root functions

1) Graph $y = \sqrt{x}$

A) Make a table!

x	y
0	0
1	1
4	2
9	3

B) Graph it



C) Domain: $x \geq 0$

Range: $y \geq 0$

2) Graph $y = \sqrt{x-2}$

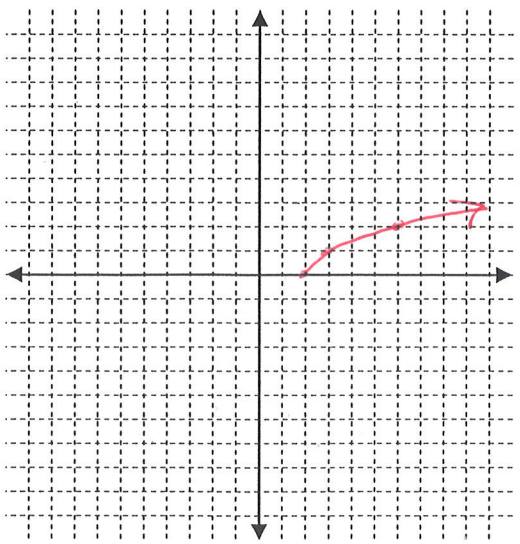
A) Make a table!

x	y
2	0
3	1
6	2
11	3

$x - 2 \geq 0$
$+2 \quad +2$
$x \geq 2$

$x - 2 = 0$
$x - 2 = 1$
$x - 2 = 4$
$x - 2 = 9$

B) Graph it



C) Domain: $x \geq 2$

Range: $y \geq 0$

D) Compare the function to the parent graph:

moves right 2 units.

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REVIEW 10.1-10.2

3) Graph $y=\sqrt{x+2}$

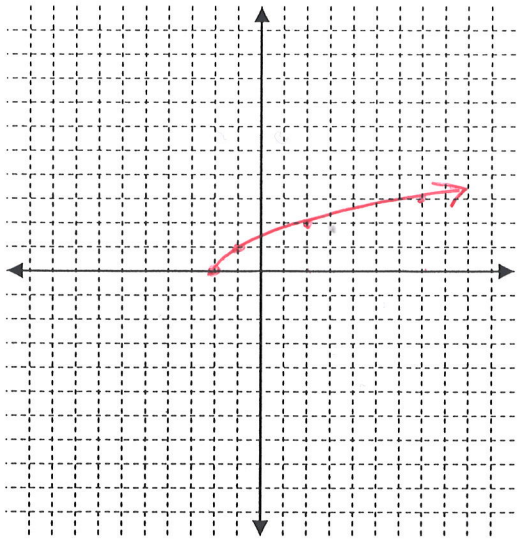
A) Make a table!

$x+2\geq 0$
$-2\ -2$
$x\geq -2$

x	y
-2	0
-1	1
2	2
7	3

$x+2=0$
$x+2=1$
$x+2=4$
$x+2=9$

B) Graph it



C) Domain: $x\geq -2$

Range: $y\geq 0$

D) Compare the function to the parent graph:

moves left 2 units.

4) Graph $y=2\sqrt{x-2}$

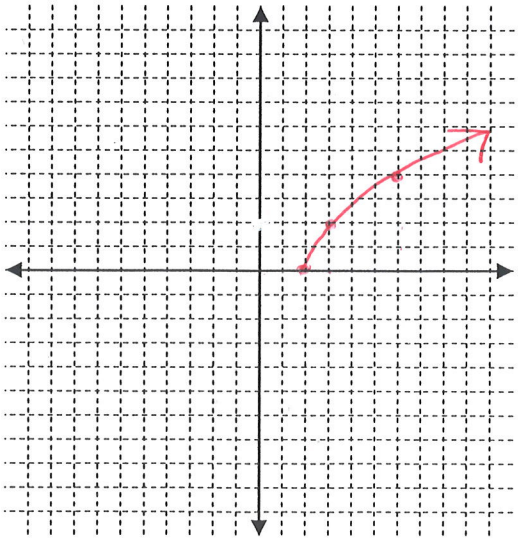
A) Make a table!

$x-2\geq 0$
$+2\ +2$
$x\geq 2$

x	y
2	0
3	2
6	4
11	6

$x-2=0$
$x-2=1$
$x-2=4$
$x-2=9$

B) Graph it



C) Domain: $x\geq 2$

Range: $y\geq 0$

D) Compare the function to the parent graph:

Vertical stretch of 2
moves 2 units right

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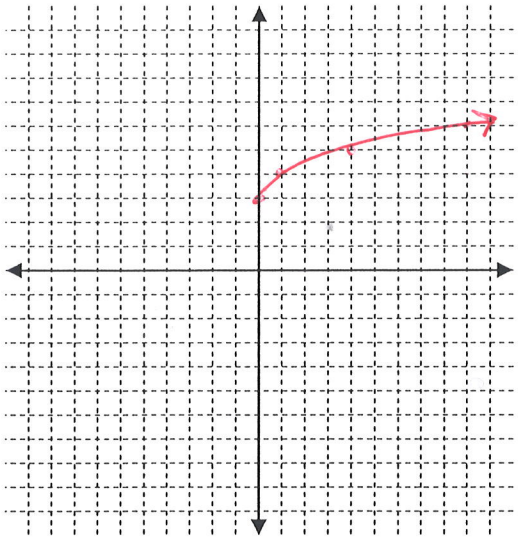
REVIEW 10.1-10.2

5) Graph $y = \sqrt{x} + 3$

A) Make a table!

B) Graph it



x	y
0	3
1	4
4	5
9	6

x=0
x=1
x=4
x=9

C) Domain: $x \geq 0$

Range: $y \geq 3$

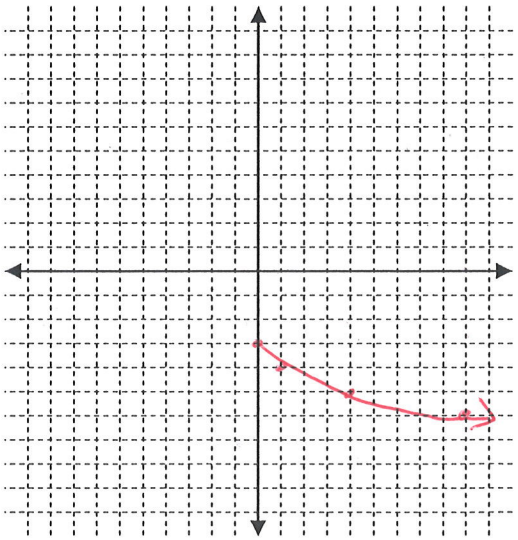
D) Compare the function to the parent graph:

moves up 3 units

6) Graph $y = -\sqrt{x} - 3$

A) Make a table!

B) Graph it



x	y
0	-3
1	-4
4	-5
9	-6

x=0
x=1
x=4
x=9

C) Domain: $x \geq 0$

Range: $y \leq -3$

D) Compare the function to the parent graph:

reflects over x-axis.

moves down 3 units