

Name: ALG 2

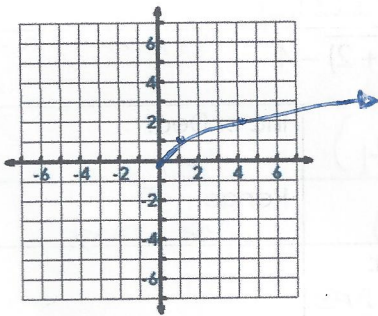
Date: 3/26/2020

GSE Algebra II

Sketch the graph and fill in the chart for each of the following. Describe the transformation beside the graph.

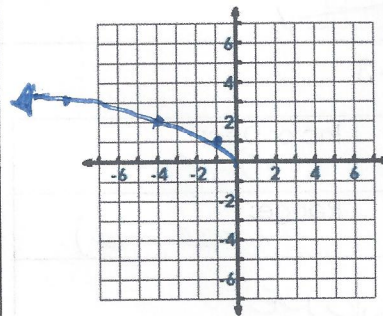
1. $f(x) = \sqrt{x}$ H K
(0,0)

Starting Pt: <u>H (0,0)</u>	Inc or Dec: <u>INC</u> LEFT TO RIGHT
Domain: <u>[0, +∞)</u> STARTING PT	Range: <u>[0, +∞)</u> ST. PT K
Abs. Max or Abs Min: <u>AB MIN</u> @ HK (0,0)	
End Behavior: $x \rightarrow \frac{0}{h}, f(x) \rightarrow \frac{0}{k}$ $x \rightarrow \infty, f(x) \rightarrow \infty$	



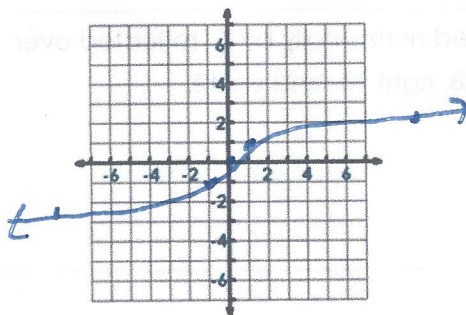
2. $f(x) = \sqrt{-x}$ reflect of y axis h,k
(0,0)

Starting Pt: <u>h,k (0,0)</u>	Inc or Dec: <u>DEC</u>
Domain: <u>(-∞, 0]</u>	Range: <u>[0, +∞)</u> Y
Abs. Max or Abs Min: <u>AB MIN</u> @ HK (0,0)	
End Behavior: $x \rightarrow -\infty, f(x) \rightarrow \infty$ $x \rightarrow \frac{0}{h}, f(x) \rightarrow \frac{0}{k}$	



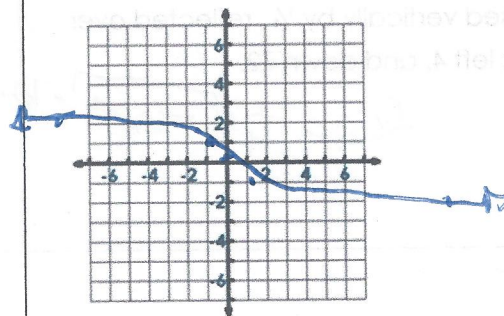
3. $f(x) = \sqrt[3]{x}$ left to right

Starting Pt: <u>(0,0)</u> STARTING PT	Inc or Dec: <u>INC</u>
Domain: <u>(-∞, +∞)</u>	Range: <u>(-∞, +∞)</u>
Abs. Max or Abs Min: <u>NONE</u>	
End Behavior: $x \rightarrow -\infty, f(x) \rightarrow -\infty$ $x \rightarrow \infty, f(x) \rightarrow \infty$	



4. $f(x) = -\sqrt[3]{x}$ reflect of x axis

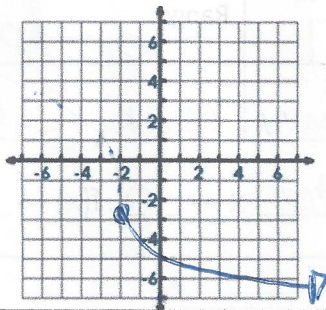
Starting Pt: <u>(0,0)</u>	Inc or Dec: <u>DEC</u>
Domain: <u>(-∞, +∞)</u>	Range: <u>(-∞, +∞)</u>
Abs. Max or Abs Min: <u>NONE</u>	
End Behavior: $x \rightarrow -\infty, f(x) \rightarrow \infty$ $x \rightarrow \infty, f(x) \rightarrow -\infty$	



5. $f(x) = -4\sqrt{x+2} - 3$

reflect across
x axis

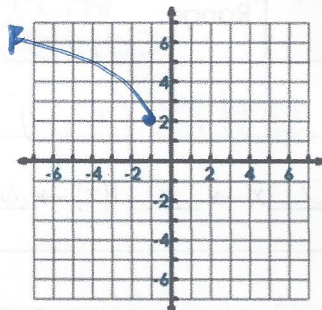
Starting Pt: $(-2, -3)$	Inc or Dec: DEC
Domain: $[-2, +\infty)$	Range: $(-\infty, -3]$
Abs. Max or Abs Min: $(-2, -3)$	
End Behavior: $x \rightarrow -2, f(x) \rightarrow -3$ $x \rightarrow +\infty, f(x) \rightarrow -\infty$	



6. $f(x) = \sqrt{-2(x+1)} + 2$

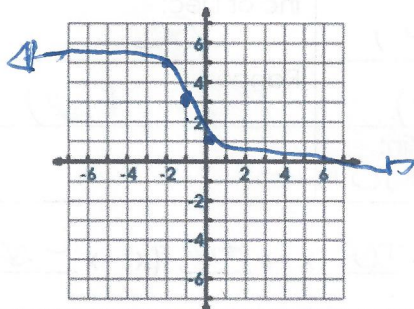
$-2x-2$
occur near

Starting Pt: $(-1, 2)$	Inc or Dec: DEC
Domain: $(-\infty, -1]$	Range: $[2, +\infty)$
Abs. Max or Abs Min: $(-1, 2)$	
End Behavior: $x \rightarrow -1, f(x) \rightarrow 2$ $x \rightarrow -\infty, f(x) \rightarrow +\infty$	



7. $f(x) = -2\sqrt[3]{x-1} + 3$

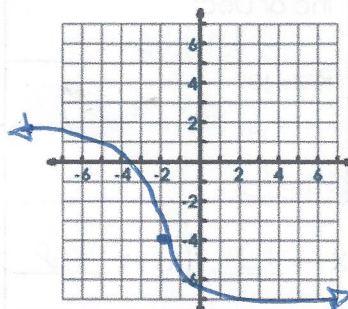
Starting Pt: TP $(1, 3)$	Inc or Dec: DEC
Domain: $(-\infty, +\infty)$	Range: $(-\infty, +\infty)$
Abs. Max or Abs Min: NONE	
End Behavior: $x \rightarrow +\infty, f(x) \rightarrow -\infty$ $x \rightarrow -\infty, f(x) \rightarrow +\infty$	



8. $f(x) = \sqrt[3]{-3(x+2)} - 4$

across y axis

Starting Pt: $(-2, -4)$	Inc or Dec: DEC
Domain: $(-\infty, +\infty)$	Range: $(-\infty, +\infty)$
Abs. Max or Abs Min: NONE	
End Behavior: $x \rightarrow +\infty, f(x) \rightarrow -\infty$ $x \rightarrow -\infty, f(x) \rightarrow +\infty$	



Write the equation of the radical with the given transformations.

9. Compressed vertically by $\frac{1}{4}$, reflected over the y-axis, left 4, and down 72.

$a = \frac{1}{4}$
 $b = -$
 $h = +4$
 $k = -72$
 $f(x) = \frac{1}{4}\sqrt{-(x+4)^2 - 72}$

10. Stretched horizontally by 7, reflected over the x-axis, right 13, and up 42.