

Transformations Right 1

State 3 points on Graph (1/5, -1) (2, 0) (6, 1)

Domain (1, ∞)

Range ℝ

Asymptote X = 1

X-intercept (2, 0) Y-intercept NONE

Increasing (-∞, ∞) Decreasing NONE

End Behavior X → 1, f(x) → -∞  
X → ∞, f(x) → ∞

Transformations left + 2, down 1

State 3 points on Graph (-2/3, -2) (-1, -1) (1, 0)

Domain (-2, ∞)

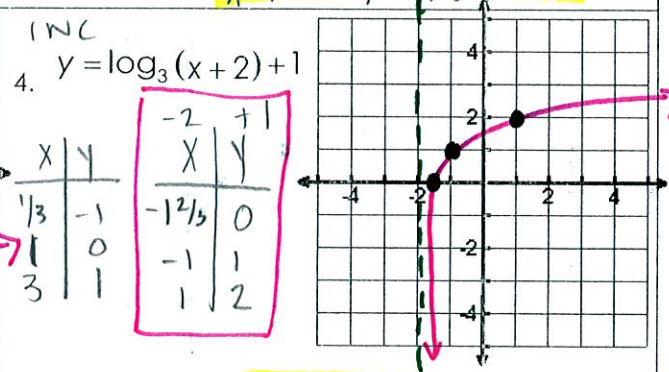
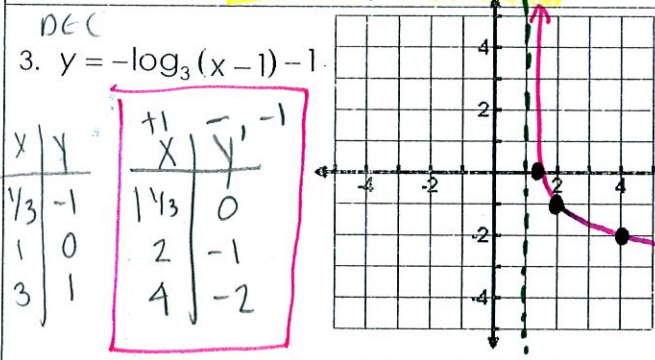
Range ℝ

Asymptote X = -2

X-intercept (1, 0) Y-intercept (0, -3.69)

Increasing (-∞, ∞) Decreasing NONE

End Behavior X → -2, f(x) → -∞  
X → ∞, f(x) → ∞



Transformations reflect over x-axis, right + 1, down 1

State 3 points on Graph (1/3, 0) (2, -1) (4, -2)

Domain (1, ∞)

Range ℝ

Asymptote X = 1

X-intercept (1/3, 0) Y-intercept NONE

Increasing NONE Decreasing (-∞, ∞)

End Behavior X → 1, f(x) → ∞  
X → ∞, f(x) → -∞

Transformations left + 2, up 1

State 3 points on Graph (-2/3, 0) (-1, 1) (1, 2)

Domain (-2, ∞)

Range ℝ

Asymptote X = -2

X-intercept (-2/3, 0) Y-intercept (0, 1.63)

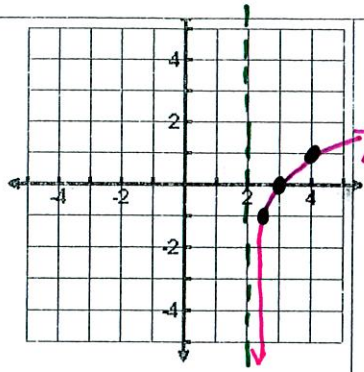
Increasing (-∞, ∞) Decreasing NONE

End Behavior X → -2, f(x) → -∞  
X → ∞, f(x) → ∞



INC  
5.  $y = \log_2(x-2)$

X	Y
$\frac{1}{2}$	-1
1	0
2	1



Transformations right + 2

State 3 points on Graph  $(2\frac{1}{2}, -1)$ ,  $(3, 0)$ ,  $(4, 1)$

Domain  $(2, \infty)$

Range  $\mathbb{R}$

Asymptote  $x = 2$

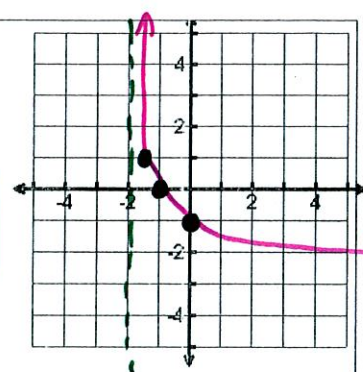
X-intercept  $(3, 0)$  Y-intercept NONE

Increasing  $(-\infty, \infty)$  Decreasing NONE

End Behavior  $x \rightarrow 2, f(x) \rightarrow -\infty$   
 $x \rightarrow \infty, f(x) \rightarrow \infty$

DEC  
6.  $y = \log_{\frac{1}{2}}(x+2)$

X	Y
2	-1
1	0
$\frac{1}{2}$	1



Transformations left + 2

State 3 points on Graph  $(0, -1)$ ,  $(-1, 0)$ ,  $(-\frac{1}{2}, 1)$

Domain  $(-2, \infty)$

Range  $\mathbb{R}$

Asymptote  $x = -2$

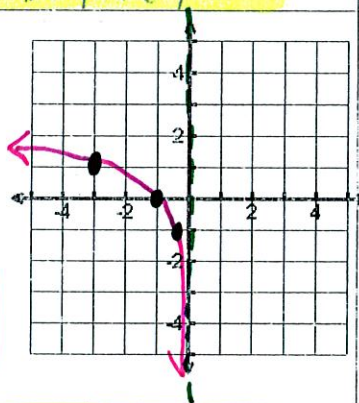
X-intercept  $(-1, 0)$  Y-intercept  $(0, -1)$

Increasing NONE Decreasing  $(-\infty, \infty)$

End Behavior  $x \rightarrow -2, f(x) \rightarrow \infty$   
 $x \rightarrow \infty, f(x) \rightarrow -\infty$

DEC  
7.  $y = \log_3(-x)$

X	Y
$\frac{1}{3}$	-1
1	0
3	1



Transformations reflect over y-axis

State 3 points on Graph  $(-\frac{1}{3}, -1)$ ,  $(-1, 0)$ ,  $(-3, 1)$

Domain  $(-\infty, 0)$

Range  $\mathbb{R}$

Asymptote  $x = 0$

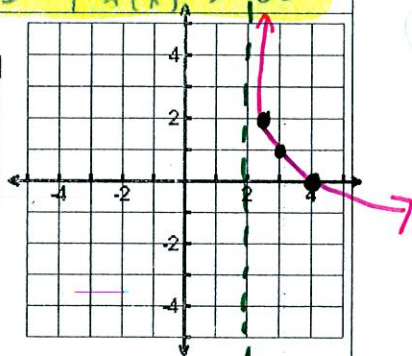
X-intercept  $(-1, 0)$  Y-intercept NONE

Increasing NONE Decreasing  $(-\infty, \infty)$

End Behavior  $x \rightarrow -\infty, f(x) \rightarrow \infty$   
 $x \rightarrow 0, f(x) \rightarrow -\infty$

DEC  
8.  $y = -\log_2(x-2) + 1$

X	Y
$\frac{1}{2}$	-1
1	0
2	1



Transformations reflect over x, right + 2, down

State 3 points on Graph  $(2\frac{1}{2}, 2)$ ,  $(3, 1)$ ,  $(4, 0)$

Domain  $(2, \infty)$

Range  $\mathbb{R}$

Asymptote  $x = 2$

X-intercept  $(4, 0)$  Y-intercept NONE

Increasing NONE Decreasing  $(-\infty, \infty)$

End Behavior  $x \rightarrow 2, f(x) \rightarrow \infty$   
 $x \rightarrow \infty, f(x) \rightarrow -\infty$