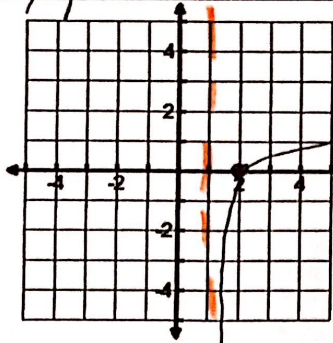


Change the sign
asymptote

1. $y = \log_5(x-1)$

$y = \frac{\log(x-1)}{\log 5}$

$$\begin{array}{r} 2 \overline{) 0} \\ 6 \overline{) 1} \end{array}$$



Transformations right 1

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

Domain (1, ∞) Range (-∞, ∞)

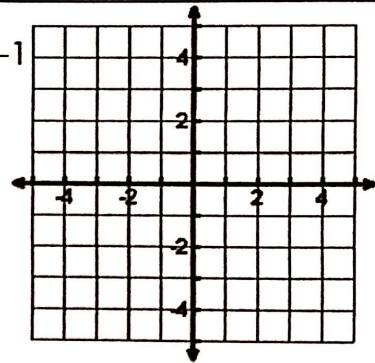
Asymptote X = 1

X-intercept 2 Y-intercept none
 $y=0$ $x=0$

Increasing or Decreasing

End Behavior $x \rightarrow \infty, f(x) \rightarrow \infty$
 $x \rightarrow 1, f(x) \rightarrow -\infty$
right left

2. $y = \log_3(x+2) - 1$



Transformations _____

State 3 points on Graph _____

Domain _____ Range _____

Asymptote _____

X-intercept _____ Y-intercept _____

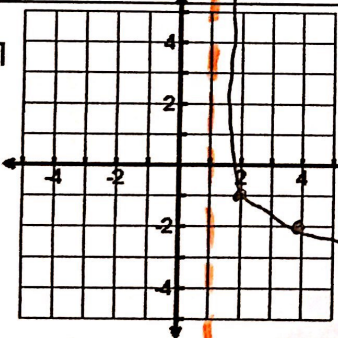
Increasing or Decreasing

End Behavior $x \rightarrow _, f(x) \rightarrow _$
 $x \rightarrow _, f(x) \rightarrow _$

3. $y = -\log_3(x-1) - 1$

$= -\frac{\log(x-1)}{\log(3)} - 1$

$$\begin{array}{r} 2 \overline{) -1} \\ 4 \overline{) -2} \\ 10 \overline{) -3} \end{array}$$



Transformations flip, right 1, down 1

State 3 points on Graph (2, -1) (4, -2) (10, -3)

Domain (1, ∞) Range (-∞, ∞)

Asymptote X = 1

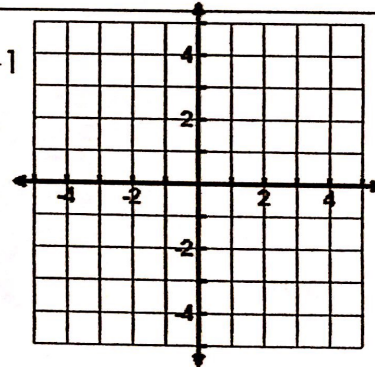
X-intercept 1.9 Y-intercept none

Increasing or Decreasing

End Behavior $x \rightarrow \infty, f(x) \rightarrow -\infty$
 $x \rightarrow 1, f(x) \rightarrow \infty$
Right left

asymptote

4. $y = \log_3(x+2) + 1$



Transformations _____

State 3 points on Graph _____

Domain _____ Range _____

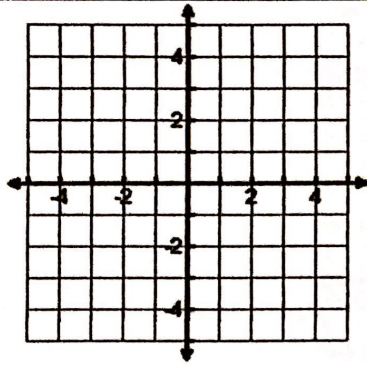
Asymptote _____

X-intercept _____ Y-intercept _____

Increasing or Decreasing

End Behavior $x \rightarrow _, f(x) \rightarrow _$
 $x \rightarrow _, f(x) \rightarrow _$

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



Transformations _____

State 3 points on Graph _____

Domain _____ Range _____

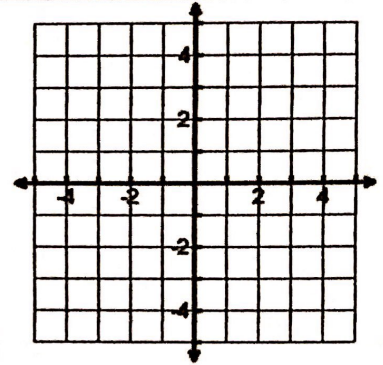
Asymptote _____

X-intercept _____ Y-intercept _____

Increasing or Decreasing

End Behavior $x \rightarrow ____, f(x) \rightarrow ____$
 $x \rightarrow ____, f(x) \rightarrow ____$

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



Transformations _____

State 3 points on Graph _____

Domain _____ Range _____

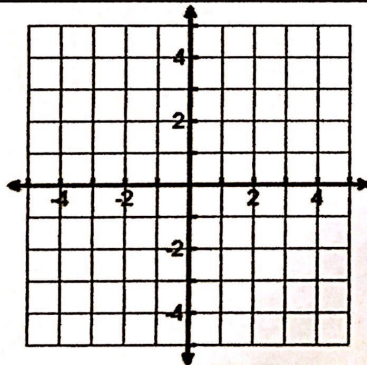
Asymptote _____

X-intercept _____ Y-intercept _____

Increasing or Decreasing

End Behavior $x \rightarrow ____, f(x) \rightarrow ____$
 $x \rightarrow ____, f(x) \rightarrow ____$

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



Transformations _____

State 3 points on Graph _____

Domain _____ Range _____

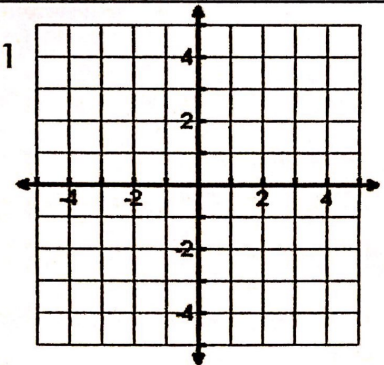
Asymptote _____

X-intercept _____ Y-intercept _____

Increasing or Decreasing

End Behavior $x \rightarrow ____, f(x) \rightarrow ____$
 $x \rightarrow ____, f(x) \rightarrow ____$

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



Transformations _____

State 3 points on Graph _____

Domain _____ Range _____

Asymptote _____

X-intercept _____ Y-intercept _____

Increasing or Decreasing

End Behavior $x \rightarrow ____, f(x) \rightarrow ____$
 $x \rightarrow ____, f(x) \rightarrow ____$