

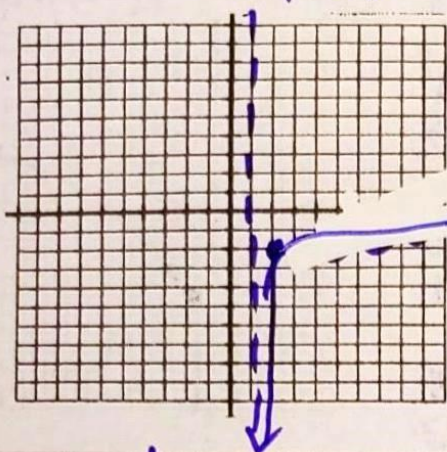
Graphing Logarithms Practice ~ Graph and identify the characteristics for each Exponential Function.

$$f(x) = \log_{10}(x - 1) - 2$$

x	10^x
0	1
1	10

1	0
10	1

2	-2
11	-1

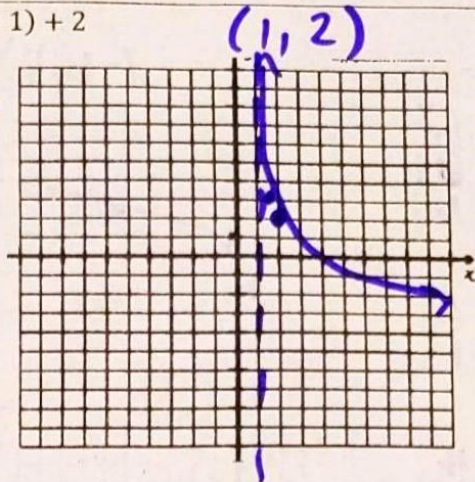


$$f(x) = \log_{\frac{1}{5}}(x - 1) + 2$$

x	$\frac{1}{5} = .2$
0	
1	.2

1	0
.2	1

2	2
1.2	3



Asymptote	$x = 1$
Domain	$(1, \infty)$
Range	$(-\infty, \infty)$
Increase/Decrease	$(1, \infty)$
End Behavior	Left: As $x \rightarrow -\infty, y \rightarrow \frac{1}{10}$ Right: As $x \rightarrow \infty, y \rightarrow +\infty$
Transformations	$\rightarrow 1, \downarrow 2$

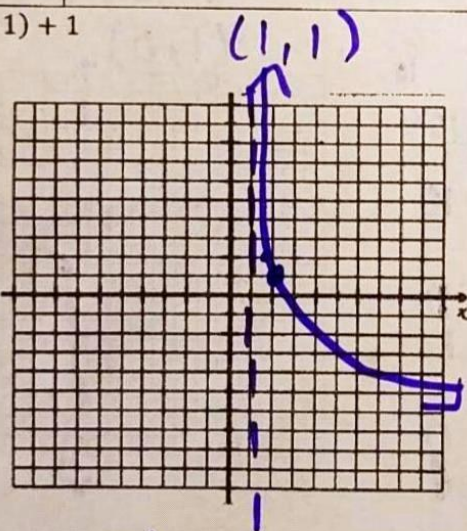
Asymptote	$x = 1$
Domain	$(1, \infty)$
Range	$(-\infty, \infty)$
Increase/Decrease	$(1, \infty)$
End Behavior	Left: As $x \rightarrow -\infty, y \rightarrow \frac{1}{5}$ Right: As $x \rightarrow \infty, y \rightarrow -\infty$
Transformations	$\rightarrow 1, \uparrow 2$

$$f(x) = \log_{\frac{1}{6}}(x - 1) + 1$$

x	$.25^x$
0	1
1	.25

1	0
.25	1

2	1
1.25	2

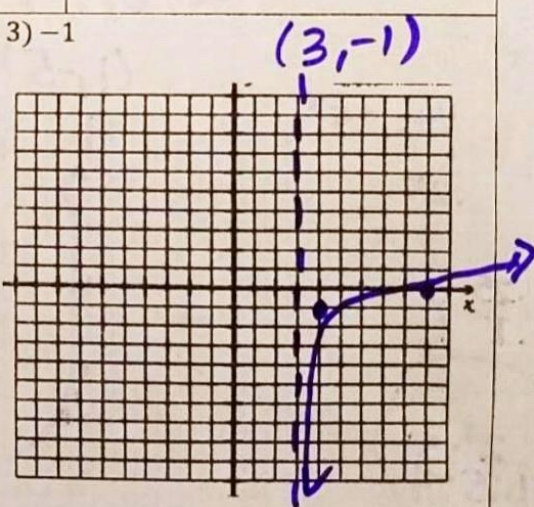


$$f(x) = \log_6(x - 3) - 1$$

x	6^x
0	1
1	6

1	0
6	1

4	-1
9	0



Asymptote	$x = 1$
Domain	$(1, \infty)$
Range	$(-\infty, \infty)$
Increase/Decrease	$(1, \infty)$
End Behavior	Left: As $x \rightarrow -\infty, y \rightarrow \frac{1}{6}$ Right: As $x \rightarrow \infty, y \rightarrow -\infty$
Transformations	$\rightarrow 1, \uparrow 1$

Asymptote	$x = 3$
Domain	$(3, \infty)$
Range	$(-\infty, \infty)$
Increase/Decrease	$(3, \infty)$
End Behavior	Left: As $x \rightarrow -\infty, y \rightarrow \frac{1}{6}$ Right: As $x \rightarrow \infty, y \rightarrow +\infty$
Transformations	$\rightarrow 3, \downarrow 1$