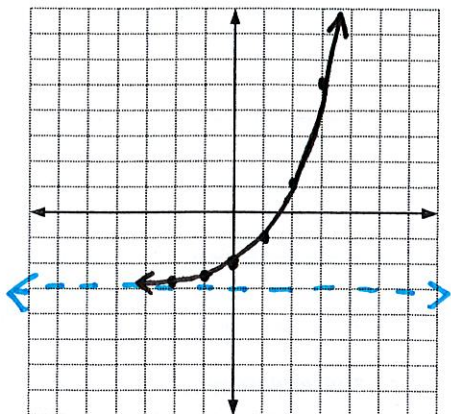


1. $f(x) = 2^x - 3$

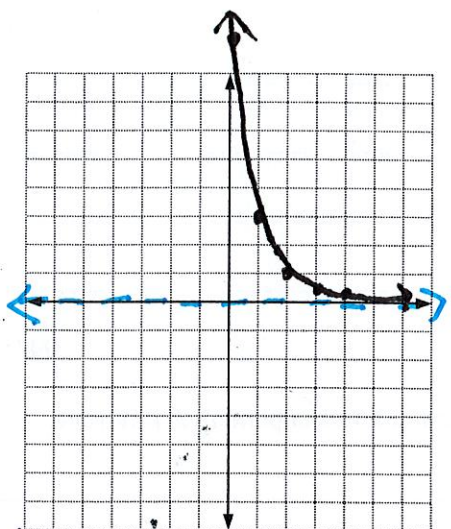


As $x \rightarrow -\infty$, $f(x) \rightarrow -3$
 As $x \rightarrow \infty$, $f(x) \rightarrow \infty$

	<u>EXPONENTIAL FUNCTION</u>	<u>**LOGARITHMIC FUNCTION</u>
Domain	$(-\infty, \infty)$	_____
Range	$(-3, \infty)$	_____
Intercept	y-int $(0, -2)$ x-int $(1.6, 0)$	_____
Asymptote	$y = -3$	_____
Growth/Decay?	<u>growth</u>	N/A

**Equation of the inverse of the exponential function

2. $f(x) = \left(\frac{1}{3}\right)^{x-2}$ **Shift right 2**

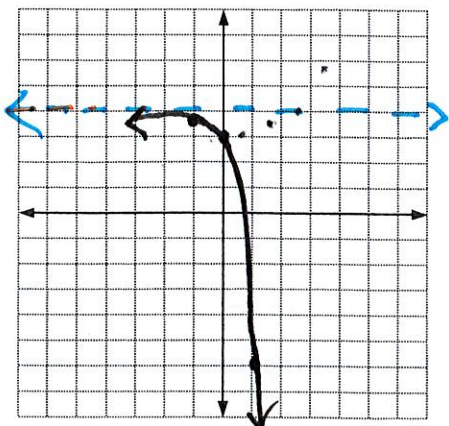


As $x \rightarrow -\infty$, $f(x) \rightarrow \infty$
 As $x \rightarrow \infty$, $f(x) \rightarrow 0$

	<u>EXPONENTIAL FUNCTION</u>	<u>**LOGARITHMIC FUNCTION</u>
Domain	$(-\infty, \infty)$	_____
Range	$(0, \infty)$	_____
Intercept	y-int $(0, 9)$	_____
Asymptote	$y = 0$	_____
Growth/Decay?	<u>decay</u>	N/A

**Equation of the inverse of the exponential function

3. $f(x) = -10^x + 4$



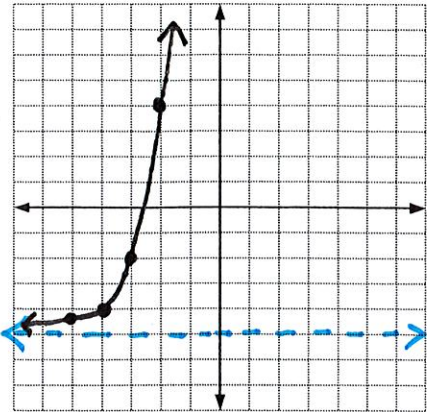
As $x \rightarrow -\infty$, $f(x) \rightarrow 4$
 As $x \rightarrow \infty$, $f(x) \rightarrow -\infty$

	<u>EXPONENTIAL FUNCTION</u>	<u>**LOGARITHMIC FUNCTION</u>
Domain	$(-\infty, \infty)$	_____
Range	$(-\infty, 4)$	_____
Intercept	y-int $(0, 3)$ x-int $(0.6, 0)$	_____
Asymptote	$y = 4$	_____
Growth/Decay?	<u>reflected growth</u>	N/A

**Equation of the inverse of the exponential function

left 4, down 5

4. $f(x) = 3^{x+4} - 5$ HA



As $x \rightarrow -\infty, f(x) \rightarrow -5$

As $x \rightarrow \infty, f(x) \rightarrow \infty$

EXPONENTIAL
FUNCTION

**LOGARITHMIC
FUNCTION

Domain

$(-\infty, \infty)$

Range

$(-5, \infty)$

Intercept

y-int
(0, 76)

x-int
(-2.5, 0)

Asymptote

$y = -5$

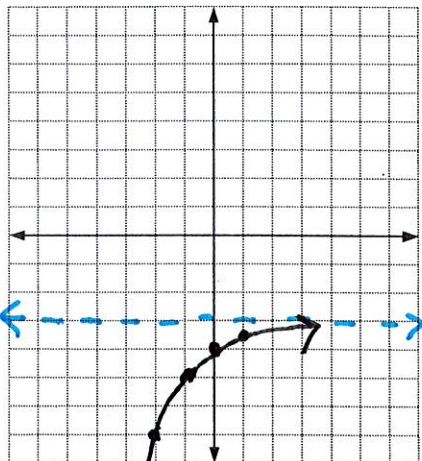
Growth/Decay?

growth

N/A

**Equation of the inverse of the exponential function

5. $f(x) = -2^{-x} - 3$ $f(x) = \left(-\frac{1}{2}\right)^x - 3$



As $x \rightarrow -\infty, f(x) \rightarrow -\infty$
As $x \rightarrow \infty, f(x) \rightarrow -3$

EXPONENTIAL
FUNCTION

**LOGARITHMIC
FUNCTION

Domain

$(-\infty, \infty)$

Range

$(-\infty, -3)$

Intercept

y-int
(0, -4)

x-int
none

Asymptote

$y = -3$

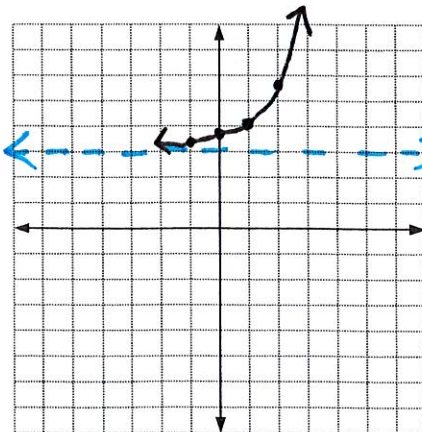
Growth/Decay?

reflected
decay

N/A

**Equation of the inverse of the exponential function

6. $f(x) = e^{x-1} + 3$



As $x \rightarrow -\infty, f(x) \rightarrow 3$
As $x \rightarrow \infty, f(x) \rightarrow \infty$

EXPONENTIAL
FUNCTION

**LOGARITHMIC
FUNCTION

Domain

$(-\infty, \infty)$

Range

$(3, \infty)$

Intercept

y-int
(0, 3.37)

Asymptote

$y = 3$

Growth/Decay?

growth

N/A

**Equation of the inverse of the exponential function