Algebra 2 CC
Log Graphs

Name _____

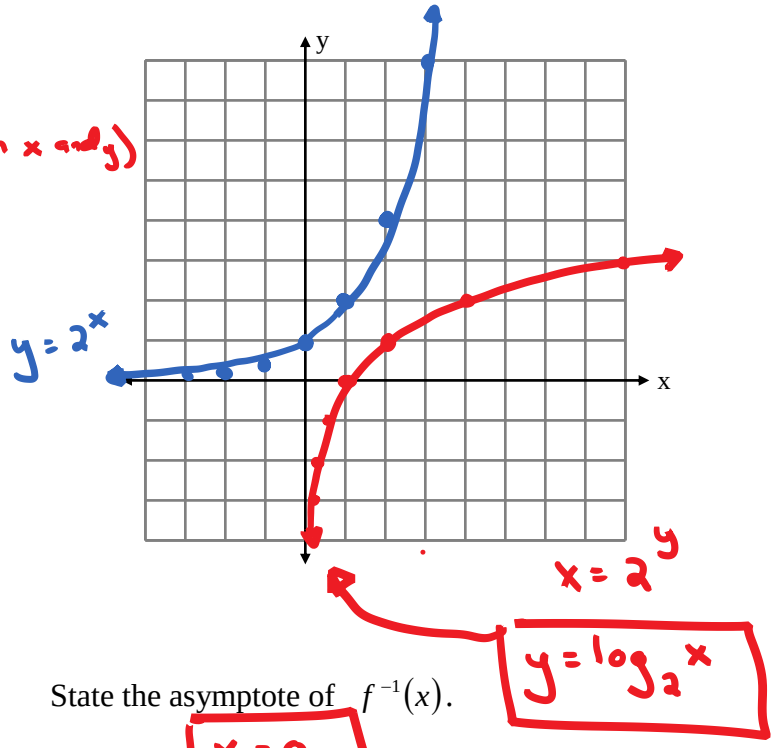
Graph: $f(x) = 2^x$

x	y
-3	.125
-2	.25
-1	.5
0	1
1	2
2	4
3	8

Graph: $f^{-1}(x)$

Inverse (switch x and y)

x	y
.125	-3
.25	-2
.5	-1
1	0
2	1
4	2
8	3



State the asymptote of $f(x)$.

$y = 0$

State the asymptote of $f^{-1}(x)$.

$x = 0$

1.) Which equation represents the **inverse** of $y = 3^x$?

Base 3

(a) $y = x^3$ (b) $3^x = y$ (c) $x = \log_3 y$ (d) $y = \log_3 x$

2.) Which equation represent the **inverse** of $y = \log_5 x$?

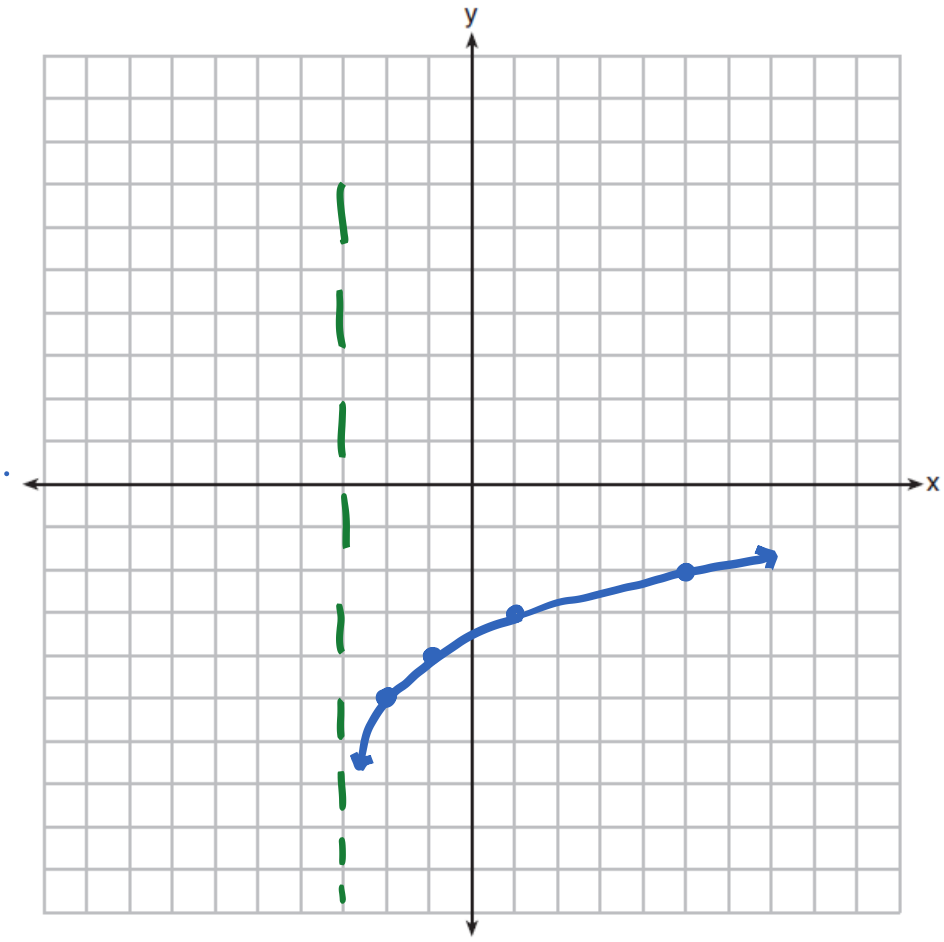
(a) $y = x^5$ (b) $y = 5^x$ (c) $x = y^5$ (d) $x = 5^y$

3.) When $g(x)=\dfrac{2}{x+2}$ and $h(x)=\log(x+1)+3$ are graphed on the same set of axes, which coordinates best approximate their point of intersection?

(a) $(-0.9,1.8)$ (b) $(-0.9,1.9)$ (c) $(1.4,3.3)$ (d) $(1.4,3.4)$

4.) Graph $y=\log_2(x+3)-5$ on the set of axes below. Use an appropriate scale to include **both** intercepts.

x	y
-3	undefined
-2	-5
-1	-4
1	-3
5	-2
13	-1



Describe the end behavior of the given function as x approaches -3 and as x approaches positive infinity.

$x \to -3^+, \; f(x) \to -\infty$

$x \to \infty, \; f(x) \to \infty$