Math 114
Lab Quiz
Tue Nov 10, 2009

Name: _____

SCORE: ___ / 6 POINTS

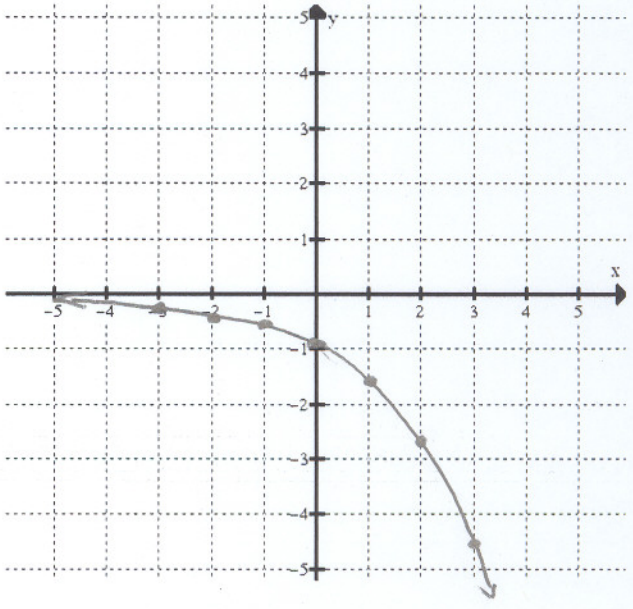
USE YOUR *NON-GRAPHING* CALCULATOR FOR THIS QUIZ

Let $f(x) = -\frac{1}{2} \cdot 3^{\frac{x+1}{2}}$

[a] Fill in the following table of values.
Round your answers to 1 decimal place.

x	$f(x)$
-3	$-\frac{1}{2} \cdot 3^{-1} = -0.2$
-2	$-\frac{1}{2} \cdot 3^{-\frac{1}{2}} = -0.3$
-1	$-\frac{1}{2} \cdot 3^{0} = -0.5$
0	$-\frac{1}{2} \cdot 3^{\frac{1}{2}} = -0.9$
1	$-\frac{1}{2} \cdot 3^{1} = -1.5$
2	$-\frac{1}{2} \cdot 3^{\frac{3}{2}} = -2.6$
3	$-\frac{1}{2} \cdot 3^{2} = -4.5$

[b] Plot the points from [a] on the grid below, and draw the graph of $f(x)$.



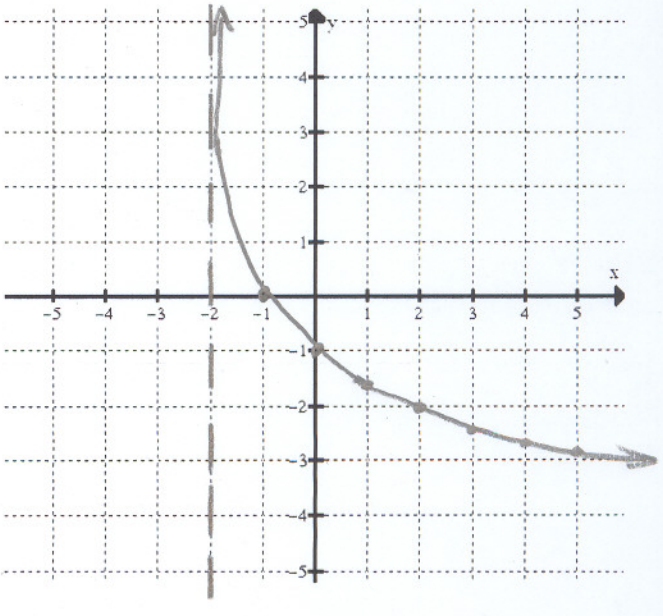
Let $f(x) = -\log_2(x+2)$

[a] What is the equation of the vertical asymptote of the graph of $f(x)$? $x+2=0$, $x=-2$

[b] Fill in the following table of values. Choose your values of x based on your answer to [a]. Round your answers to 1 decimal place.

x	$f(x)$
-1	$-\log_2 1 = 0$
0	$-\log_2 2 = -1$
1	$-\log_2 3 = -\frac{\log 3}{\log 2} = -1.6$
2	$-\log_2 4 = -2$
3	$-\log_2 5 = -\frac{\log 5}{\log 2} = -2.3$
4	$-\log_2 6 = -\frac{\log 6}{\log 2} = -2.6$
5	$-\log_2 7 = -\frac{\log 7}{\log 2} = -2.8$

[c] Plot the points from [b] on the grid below, and draw the graph of $f(x)$.



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USE YOUR *NON-GRAPHING* CALCULATOR FOR THIS QUIZ

Let $f(x) = 2\log_3(x+4)$

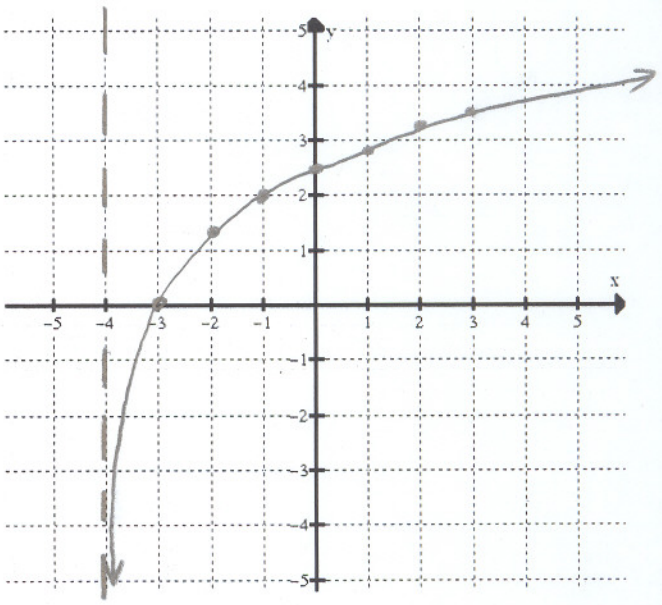
$x+4=0$

[a] What is the equation of the vertical asymptote of the graph of $f(x)$? $x=-4$

[b] Fill in the following table of values. Choose your values of x based on your answer to [a]. Round your answers to 1 decimal place.

x	$f(x)$
-3	$2\log_3 1 = 2\cdot 0 = 0$
-2	$2\log_3 2 = 2\cdot \frac{\log 2}{\log 3} = 1.3$
-1	$2\log_3 3 = 2\cdot 1 = 2$
0	$2\log_3 4 = 2\cdot \frac{\log 4}{\log 3} = 2.5$
1	$2\log_3 5 = 2\cdot \frac{\log 5}{\log 3} = 2.9$
2	$2\log_3 6 = 2\cdot \frac{\log 6}{\log 3} = 3.3$
3	$2\log_3 7 = 2\cdot \frac{\log 7}{\log 3} = 3.5$

[c] Plot the points from [b] on the grid below, and draw the graph of $f(x)$.



Let $f(x) = -\frac{1}{3}\cdot 4^{\frac{x+2}{3}}$

[a] Fill in the following table of values. Round your answers to 1 decimal place.

x	$f(x)$
-3	$-\frac{1}{3}\cdot 4^{-\frac{1}{3}} = -0.2$
-2	$-\frac{1}{3}\cdot 4^{0} = -0.3$
-1	$-\frac{1}{3}\cdot 4^{\frac{1}{3}} = -0.5$
0	$-\frac{1}{3}\cdot 4^{\frac{2}{3}} = -0.8$
1	$-\frac{1}{3}\cdot 4^{1} = -1.3$
2	$-\frac{1}{3}\cdot 4^{\frac{4}{3}} = -2.1$
3	$-\frac{1}{3}\cdot 4^{\frac{5}{3}} = -3.4$

[b] Plot the points from [a] on the grid below, and draw the graph of $f(x)$.