

Quiz 6

Math 3C: Precalculus

November 14, 2019

When you finish, please remain seated until class is dismissed

Name: Solutions

PID: _____

Problem 1 (5 points). Solve the equation $3 \cdot 4^{2x-1} = 6$ for x .

$$3 \cdot 4^{2x-1} = 6$$

$$\Rightarrow 4^{2x-1} = 2$$

$$\Rightarrow \log_4(4^{2x-1}) = \log_4(2)$$

$$\Rightarrow 2x-1 = \log_4(2)$$

$$\Rightarrow 2x = 1 + \log_4(2)$$

$$\Rightarrow x = \frac{1 + \log_4(2)}{2}$$

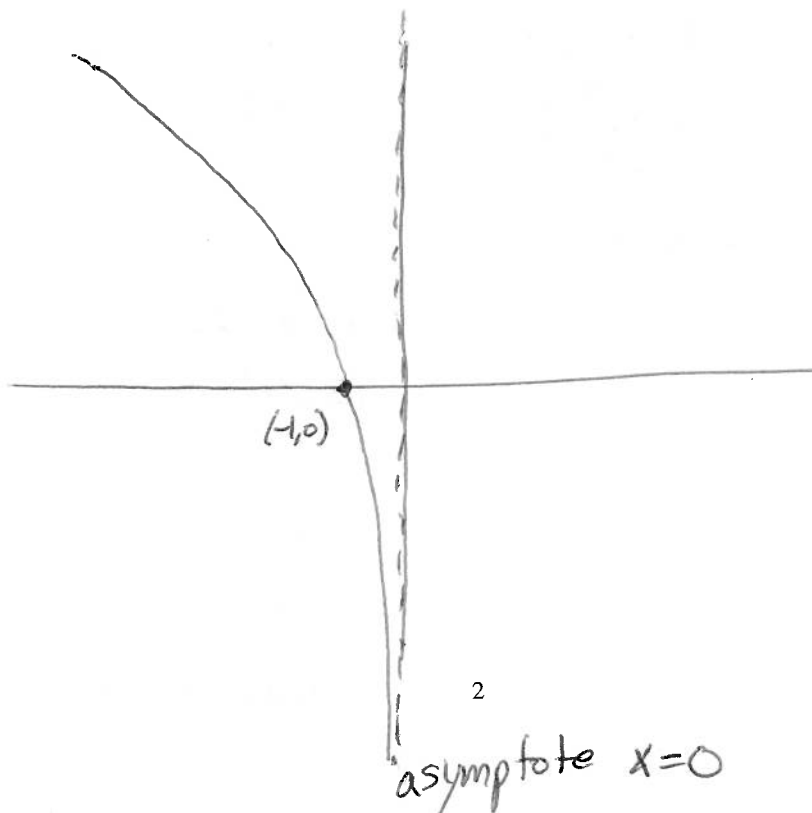
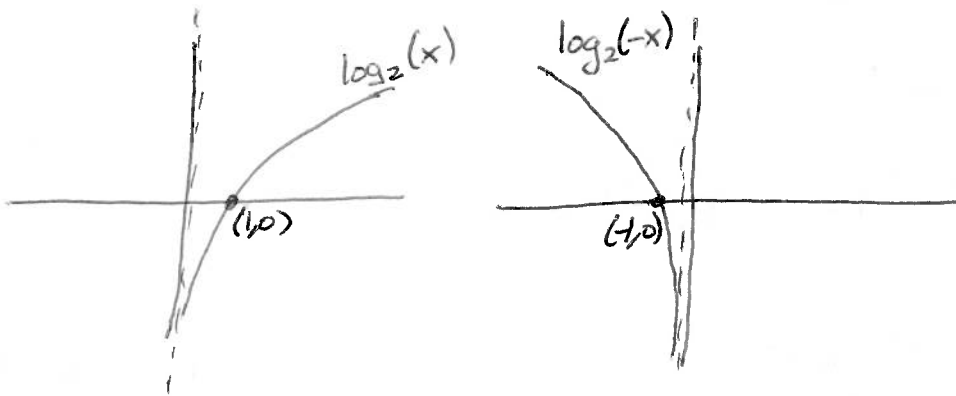
optional simplification

$$= \frac{1 + \frac{1}{2}}{2} = \frac{3}{4}$$

Since $4^{\frac{1}{2}} = \sqrt{4} = 2$,
 $\log_4(2) = \frac{1}{2}$

Problem 2 (5 points). Sketch the graph of $a(x) = 2 \cdot \log_2(-x)$. Label any asymptotes and the *horizontal* intercept (you do not need to label the vertical intercept).

$2 \cdot \log_2(-x)$ is like $\log_2(x)$ but
horizontally reflected and
vertically stretched



← Final Answer