

Name:

Date:

Quiz 1

AP Calculus - Hargus

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1. Convert these angles from radians into degrees, or degrees to radians:

(a)  $2\pi$

(b)  $\frac{\pi}{3}$

(c)  $150^\circ$

2. Give the inverse function  $f^{-1}(x)$  for the following functions:

(a)  $f(x) = \frac{x}{x-1}$

(b)  $f(x) = \ln x$

(c)  $f(x) = x^2 + 2$

3. Rewrite as a whole number:

(a)  $5^{-2} \cdot 5 \cdot 5^3$

(b)  $21^2(7^{-2} + 3^{-2})$

(c)  $\log_5(25^2)$

4. True or false?

(a)  $\sin^{-1}(x) = \frac{1}{\sin x}$

(b)  $\ln ab = \ln a + \ln b$

(c) If  $a = b$ , then  $e^a = e^b$

5. If we are given a graph of a function, what test can we use to tell if the function has an inverse? \_\_\_\_\_
6. Based on  $f(x)$  in the graph below, draw the inverse function  $f^{-1}(x)$  on the same graph below:

