

Name: _____

QUIZ 9
305G 10-22-08

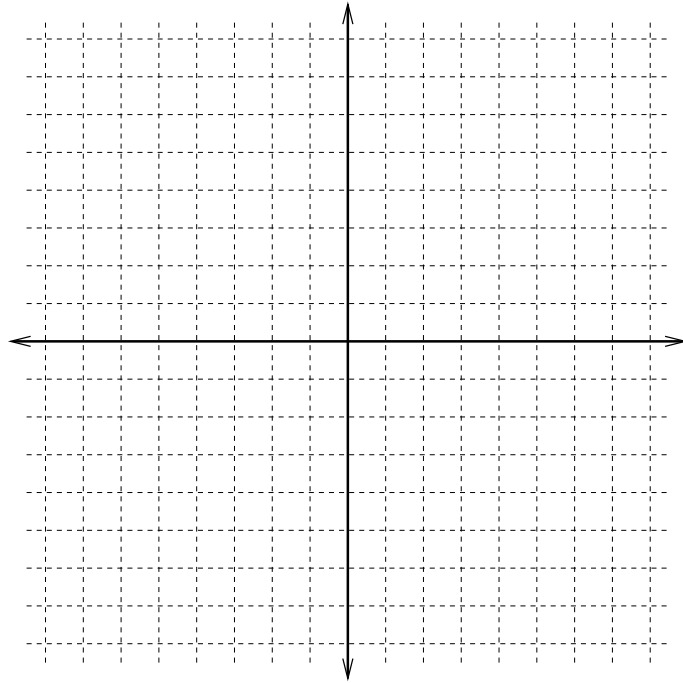
(1) The function $g^{-1} = \log_4(x)$ is the inverse of the function $g(x) =$ _____.

(2) Since the domain of $g(x) = \log_4 x$ is _____, the domain of $h(x) = \log_4\left(\frac{x-1}{x+5}\right)$ is all real numbers x which satisfy the equation, _____.

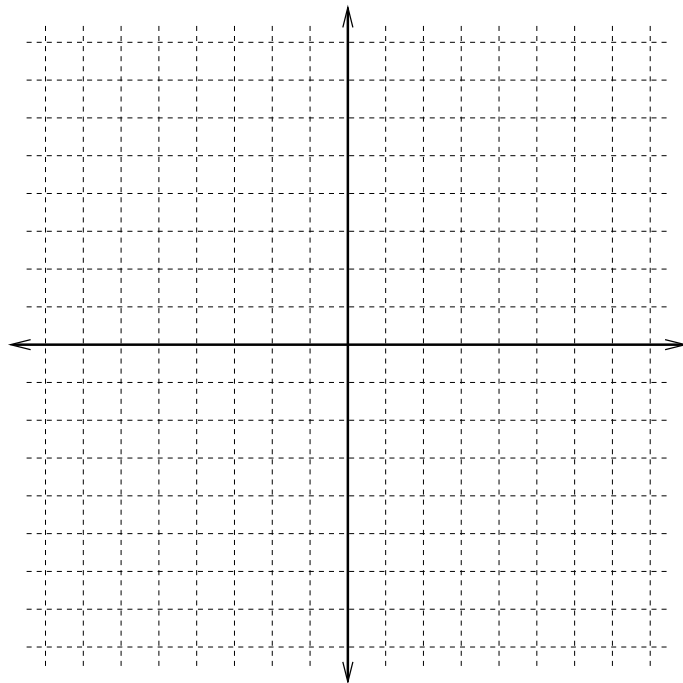
(3) Solve the equation $9^{x^2} = 3^{\frac{x}{5}}$ for x .

4. Consider the function $f(x) = 2 - 3^{-x}$
- Starting with the graph of the basic exponential function, use two graph transformations to obtain the graph of $f(X)$. At each step of the transformation process, draw a new graph and write the formula for function you are graphing. You should have two transformations and three graphs.

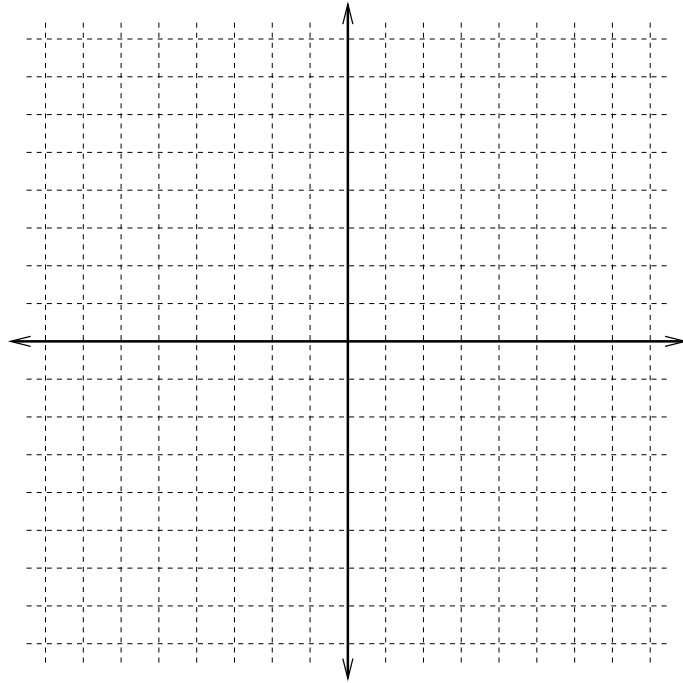
1. _____



2. _____



3. _____



b. What is the domain of $f(x)$?

c. What is the range of $f(x)$?

d. Write the equation of the horizontal asymptote.