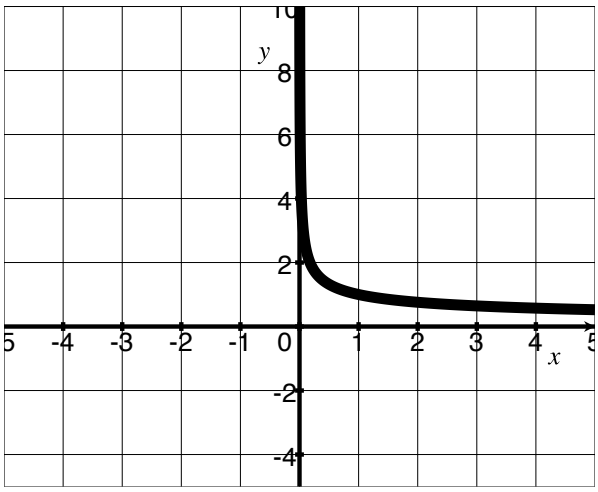
Quiz 4

Show *all* your work algebraically for each. No credit is given without supporting work. There are *two* sides to this quiz.

1. Let $f(x) = x^{-\frac{2}{5}}$. The graph of f is given below.

   (a) [2] (§3.1 #27)Find a formula for the inverse function f^{-1}, if it exists.



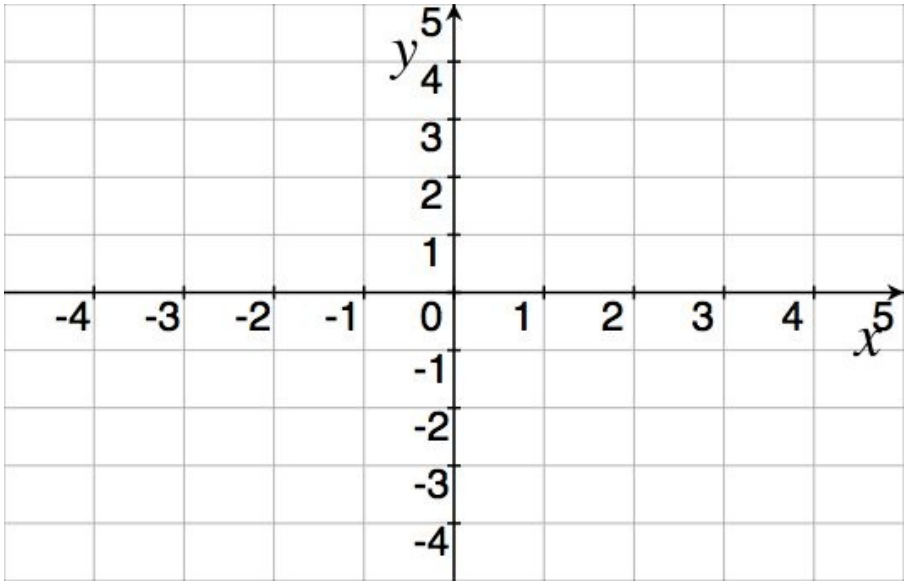
   (b) [2] (§3.1 #59) Carefully sketch the graph of $f(x+1)$.

2. [2] (Web7 #11) Rewrite the expression as a single logarithm:

$$\ln 8 + 2\ln x + 2\ln(x^2+3)$$

3. Let $g(x) = \log_2 x$.

(a) [1] (pg 239) *Carefully* draw the graph of g on the set of axes below.



(b) [1](§3.2 #63) Find $g(13)$ exactly. Show work.

(c) [2] (§3.2 #47) If g has an inverse, find it. If g does not, explain why not.