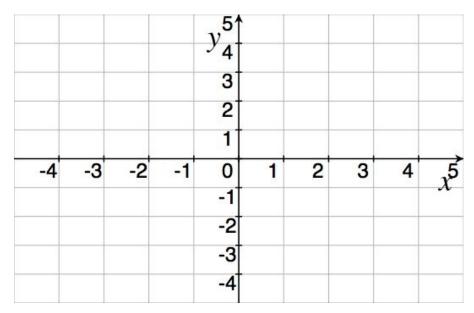# Quiz 4

Name:

Show *all* your work algebraically for each and simplify. No credit is given without supporting work.

1. [4] Assuming that $\log_3 x = 5.3$ and $\log_3 y = 2.1$ find

$$\log_3 \frac{x^3}{27y^2}$$

2. Let $f(x) = \log_6(x + 1)$.

    (a) [1] Finish the following sentence:

       The graph of f is much like the graph $\log_6(x)$ but shifted ...

    (b) [2] Plot two points on the graph of f and then sketch the graph of f.

    (c) [3] Find a formula for the inverse function f^{-1}.