AA PREP—INTRODUCTION TO LOGARITHMS—WORKSHEET 2

1. Solve for x.

a) $5^x = 125$ b) $\left(\frac{1}{5}\right)^x = 25$ c) $\left(\frac{1}{25}\right)^{x-3} = 125^{-2x}$ d) $5^x = 100$ (estimate)

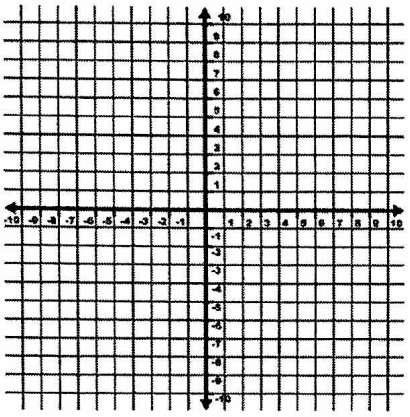
2. Write the exponential equation in logarithmic form.

a) $3^{-4} = \frac{1}{81}$ b) $1 = 12^0$

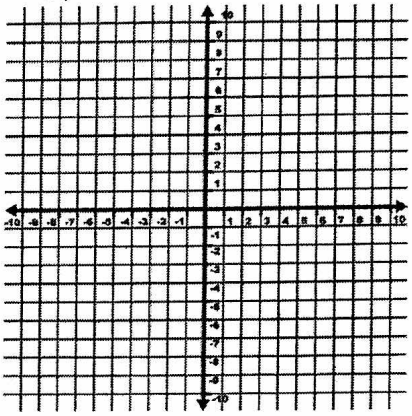
3. Write the logarithmic equation in exponential form.

a) $\log_{64} 4 = \frac{1}{3}$ b) $-\frac{1}{2} = \log_{81} \frac{1}{9}$

4. Graph $y = 4^x$.



5. Graph $y = \log_4 x$.



6. Evaluate.

a) $\log_8 8$	b) $\log_8 1$
c) $\log_8 \frac{1}{64}$	d) $\log_{512} 64$

7. Solve for x.

a) $\log_{1000} x = -\frac{1}{3}$	b) $\log_{64} \frac{1}{16} = x$
c) $\log_x 5 = \frac{1}{3}$	d) $\log_x \frac{1}{81} = 4$