Logarithms

First & Last Name: _____ **Class:** _____

If you did not get full points on the *Logarithms* section of the "Pre-Review" test, attempt all of the questions on this handout. Check your answers using the answer key. If you did not get a correct answer, use Khan Academy to review and master the topic.

Section 1: Introduction to Logarithms (KA link)

1. $\log_{10} 100 =$

2. $\log_2 64 =$

3. $\log_2 1/2 =$

4. $\log_{1/2} 4 =$

5. $\log_{0.3} 0.027 =$

Section 2: Properties of Logarithms (KA link)

1. Expand the following:
   a. $\log(2x) =$

   b. $\log(10/x) =$

   c. $\log_5(x^{10}) =$

   d. $\log_2\left(\frac{10x}{y^2}\right) =$

2. Condense the following:
   a. $10\log(x) =$

   b. $2\log_2(x) + 4\log_2(y) =$

   c. $\frac{1}{2}\log_8(a) - \frac{1}{4}\log_8(b) =$

   d. $\frac{1}{3}\log_6(a) - 3\log_6(b) + 5\log_6\left(\frac{c}{2}\right) =$