Circuit Training – Simple Logarithms   Name _____

Directions: Beginning in cell #1, work the problem. Search for your answer and call that cell #2. Continue in this manner until you complete the circuit. No technology should be used to simplify these expressions and/or solve these equations.

Answer: 7	Answer: 1	Answer: 0
# __1__ $\log_2 8$	# _____ $\log_2 64 - \log_2 2$	# _____ $\log_8 \frac{1}{2}$
Answer: $\sqrt{3}$	Answer: r	Answer: 2
# _____ $\log_e e^{10}$ (NOTE: If the base is e, then we call it "the natural log" and this problem can be also written as $\ln e^{10}$)	# _____ $r\log_a a^b$	# _____ $\log_3 81$
Answer: 3	Answer: $-\frac{1}{3}$	Answer: 9
# _____ $\log_5 25$	# _____ $\log_{10} 0.001$ (NOTE: If the base is 10, then we call it "the common log" and this problem can be also written as log 0.001)	# _____ $\log 10^7$
Answer: -2	Answer: b	Answer: 6
# _____ $\log_{100} 10$	# _____ $9\ln e$	# _____ $r\log_b b$

Answer: rb #_____ $\quad 7^{\log_7 b}$	Answer: 8 #_____ $\quad \log_6 2 + \log_6 3$ NOTE: $\log_b a + \log_b c = \log_b(ac)$	Answer: 4 #_____ $\quad \log_6 \frac{1}{6}$
Answer: $\frac{1}{3}$ #_____ $\quad \log_{12} 1$	Answer: 5 #_____ $\quad \log\sqrt{1000}$	Answer: -3 #_____ $\quad \log_x 3 = 4$
Answer: $\frac{4}{3}$ #_____ $\quad 3\ln e^2$	Answer: -1 #_____ $\quad \log_7 \frac{1}{49}$	Answer: 10 #_____ $\quad \ln e + \ln\sqrt[3]{e}$
Answer: $\sqrt[4]{3}$ #_____ $\quad \log_2 x = 3$	Answer: $\frac{3}{2}$ #_____ $\quad \log_3 x = \frac{1}{2}$	Answer: $\frac{1}{2}$ #_____ $\quad \log_{64} 4$