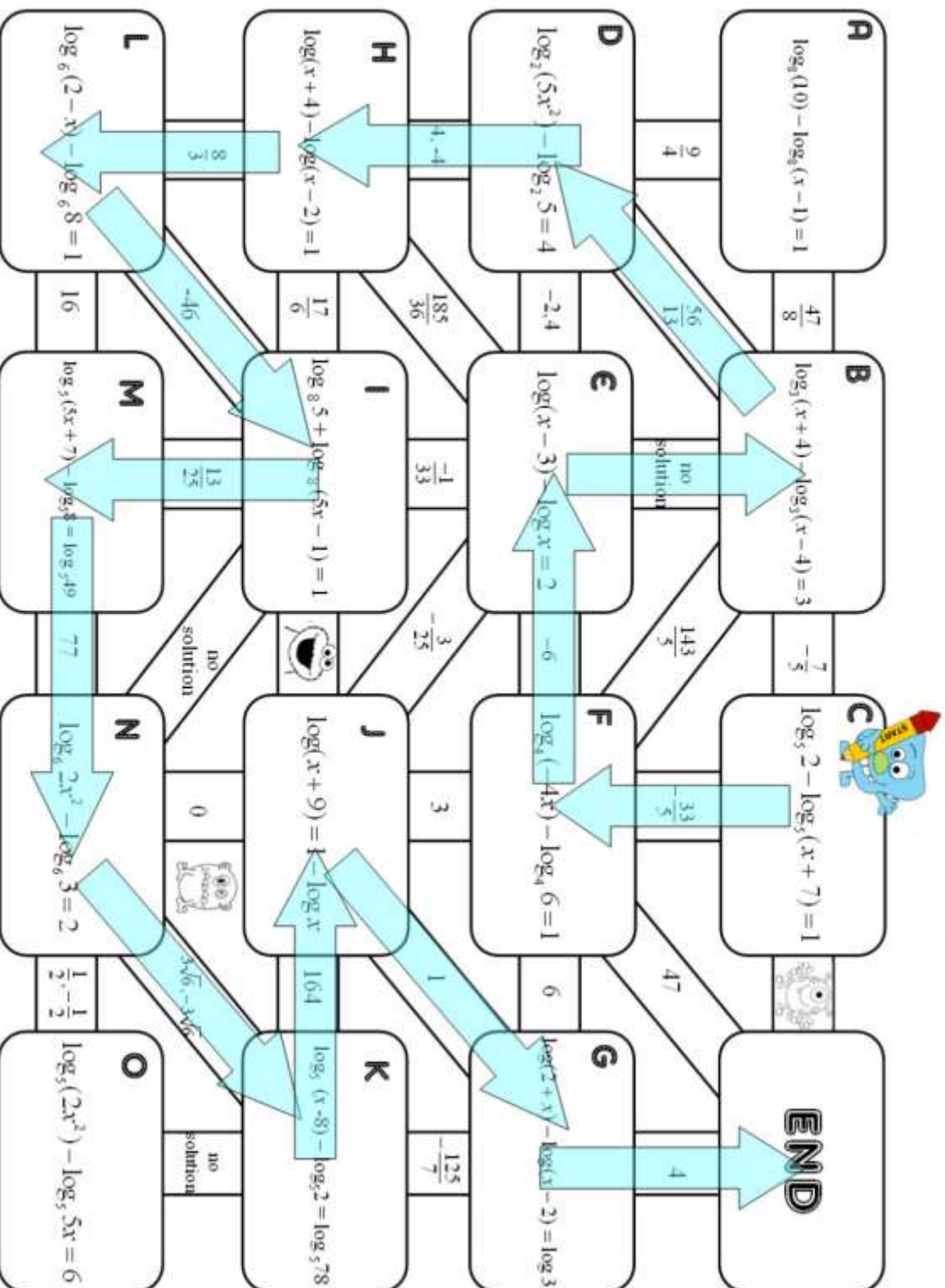


LOGARITHMIC EQUATIONS

NAME _____ KEY _____



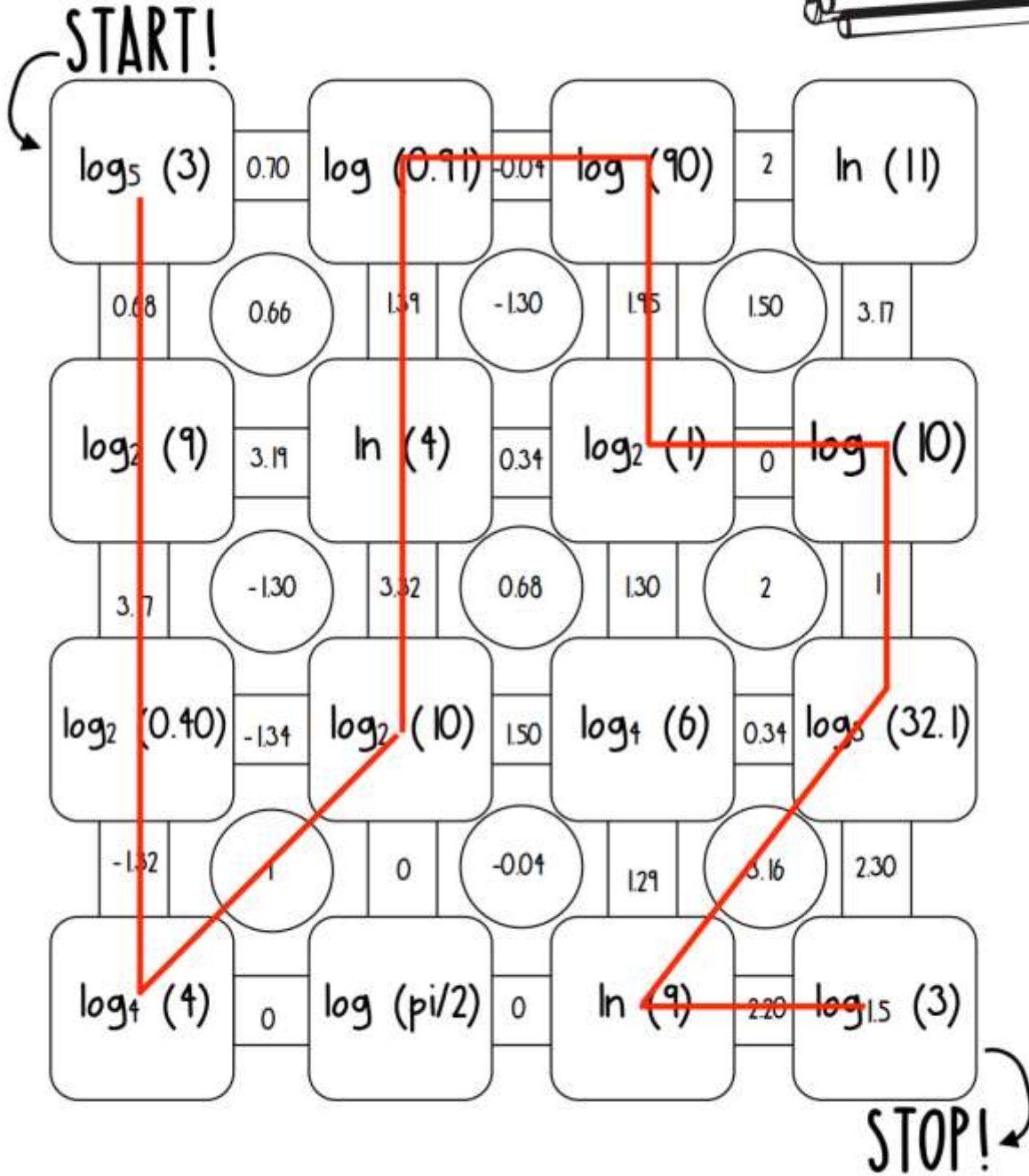
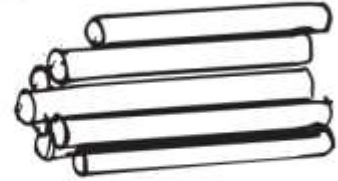
Name: **KEY**

Date: _____

Score: _____

Calculating Logs Maze

Instructions: Calculate each log until you reach the STOP point. Round your answers to the nearest hundredths place.



Logarithmic Equations Maze

Directions: Find the solution to each equation to "find the log" and solve the maze. SHOW YOUR WORK!

START! $\log_3 81 = x$ $3^x = 81$ $3^x = 3^4$ $x = 4$	5	$\log_{27} x = \frac{1}{3}$ $27^{1/3} = x$ $\sqrt[3]{27} = x$ $x = 3$	3	$\log_5 x = 2$ $5^2 = x$ $x = 25$	25	$\log_{32} x = \frac{1}{5}$ $32^{1/5} = x$ $\sqrt[5]{32} = x$ $x = 2$
4	-4	64	-64	-25	0.1	2
$\log_8 x = \frac{1}{3}$ $8^{1/3} = x$ $\sqrt[3]{8} = x$ $x = 2$	2	$\log_4 x = 3$ $4^3 = x$ $x = 64$	12	$\log_9 x = \frac{1}{2}$	3	$\log 0.01 = x$ $10^x = \frac{1}{100}$ $10^x = 10^{-2}$ $x = -2$
-2	-9	10	6	-6	-2	10
$\log_{\frac{1}{3}} x = -2$ $(\frac{1}{3})^{-2} = x$ $(\frac{3}{1})^2 = x$ $x = 9$	4	$\log_4 256 = x$ $4^x = 256$ $4^x = 4^4$ $x = 4$	$\frac{1}{9}$	$\log_3 x = -2$ $3^{-2} = x$ $x = \frac{1}{3^2}$ $x = \frac{1}{9}$	32	$\log_{\frac{1}{5}} x = 2$
9	$\frac{1}{9}$	5	-9	9	-6	$\frac{1}{25}$
$\log_{16} x = \frac{1}{4}$ $16^{1/4} = x$ $\sqrt[4]{16} = x$ $x = 2$	2	$\log_2 64 = x$ $2^x = 64$ $2^x = 2^6$ $x = 6$	6	$\log_{\sqrt{5}} 5 = x$ $\sqrt{5}^x = 5$ $5^{1/2 x} = 5^1$ $\frac{1}{2}x = 1$ $x = 2$	2	STOP! 