WL

Logarithmic Equations Maze

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

START: $\log_3 81 = x$

$3^x = 81$

$x = 4$

5

$\log_{27} x = \frac{1}{3}$

$27^{1/3} = x$

$3 = x$

3

$\log_5 x = 2$

$5^2 = x$

$x = 25$

25

$\log_{32} x = \frac{1}{5}$

$32^{1/5} = x$

$x = 2$

4

−4

64

−64

−25

0.1

2

$\log_8 x = \frac{1}{3}$

$8^{1/3} = x$

$x = 2$

2

$\log_4 x = 3$

$4^3 = x$

$64 = x$

12

$\log_9 x = \frac{1}{2}$

3

$\log 0.01 = x$

$10^x = .01$

$x = -2$

−2

−9

10

6

−6

−2

10

$\log_{\frac{1}{3}} x = -2$

$\left(\frac{1}{3}\right)^{-2} = x$

$x = 9$

4

$\log_4 256 = x$

$4^x = 256$

$x = 4$

$\frac{1}{9}$

$\log_3 x = -2$

$3^{-2} = x$

$\frac{1}{9} = x$

32

$\log_{\frac{1}{5}} x = 2$

9

$\frac{1}{9}$

5

−9

9

−6

$\frac{1}{25}$

$\log_{16} x = \frac{1}{4}$

$16^{\frac{1}{4}} = x = 2$

2

$\log_2 64 = x$

$2^x = 64$

$x = 6$

6

$\log_{\sqrt{5}} 5 = x$

$\sqrt{5}^x = 5$

$5^{\frac{1}{2}x} = 5^1$

$x = 2$

2

STOP!

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