

LOGARITHMIC ↔ EXPONENTIAL FORM *Maze!*

Directions: Begin at the Start box. Write each equation in exponential form. Use your answers to navigate through the maze!

Start!

$\log_8 \frac{1}{64} = -2$ $64^{\frac{1}{2}} = 8$ $\log_8 64 = 2$ $\frac{1^4}{2} = \frac{1}{16}$ $\log_{\frac{1}{2}} \frac{1}{16} = 4$ $2^4 = 196$ $\log_{14} 196 = 2$

$8^{-2} = \frac{1}{64}$
 $\log_4 \frac{1}{64} = -3$

End! 😊

$4^3 = 64$
 $\log_4 64 = 3$

$4^5 = 625$
 $\log_5 625 = 4$

$15^2 = 225$
 $\log_{15} 225 = 2$

EXPONENTIAL ↔ LOGARITHMIC FORM *Maze!*

Directions: Begin at the Start box. Write each equation in logarithmic form. Use your answers to navigate through the maze!

Start!

$196^{\frac{1}{2}} = 14$ $\log_{13} \frac{1}{169} = -2$ $13^{-2} = \frac{1}{169}$ $\log_{20} 400 = 2$ $20^2 = 400$ $\log_8 \frac{1}{64} = -2$ $8^{-2} = \frac{1}{64}$

$\log_{196} \frac{1}{2} = 14$
 $19^2 = 361$

$3^5 = 243$
 $\log_{81} \frac{1}{2} = 9$

$81^{\frac{1}{2}} = 9$
 $5^{-4} = \frac{1}{625}$

$\log_5 \frac{1}{4} = 625$
 $64^{\frac{1}{3}} = 4$

EVALUATING LOGARITHMS *Maze!* V1

Directions: Begin at the Start box. Use your knowledge of exponents to evaluate the following logarithms. Use your answers to navigate through the maze!

Start!

$\log_4 \frac{1}{16}$ 3 $\log_7 343$ $-\frac{1}{3}$ $\log_6 216$ $\frac{1}{2}$ $\log_{256} 16$

$\log_{11} 121$
 $\log_3 \frac{1}{243}$

$\log_4 \frac{1}{64}$
 $\log_7 1$

$\log_{243} 3$
 $\log_{17} 37$

$\log_{20} 90$
 $\log_{16} \frac{1}{256}$

\log_{140}
 $\log_{13} 123$

\log_{104}
 $\log_{18} 1$

$\log_6 \frac{1}{36}$
 \log_{128}

$\log_{400} 20$
 $\log_{243} 3$

End! 😊

Version 1: Evaluating Logarithms

EVALUATING LOGARITHMS *Maze!* V2

Directions: Begin at the Start box. Evaluate each logarithm using the Change of Base Formula. Use your answers to navigate through the maze!

$\log 20$ 2.8074 $\log_7 2$ 2.0896 $\log_{11} 150$ 2.8540 $\log_3 23$

$\log_{17} 37$
 $\log_{13} 170$

$\log_{20} 90$
 $\log_{16} \frac{1}{256}$

\log_{140}
 $\log_{13} 123$

\log_{104}
 $\log_{18} 1$

$\log_6 \frac{1}{36}$
 \log_{128}

$\log_{400} 20$
 \log_{128}

End! 😊

Version 2: Evaluating Logarithms

EVALUATING LOGARITHMS *Maze!* V3

Directions: Begin at the Start box. Evaluate each logarithm using your knowledge of exponents or the Change of Base Formula. Use your answers to navigate through the maze!

$\log_{16} 14$ 1.0506 $\log_9 87$ 2 $\log_{13} \frac{1}{13}$ 1 $\log_8 8$

$\log_{13} 170$ 0.5063 $\log_8 108$ 1.6737 $\log_{12} 64$ $\frac{1}{3}$ $\log \frac{1}{1000}$

$\log_{16} \frac{1}{256}$ $\frac{1}{2}$ $\log_{36} 6$ -4 $\log_5 625$ 1.8879 $\log_{12} 109$

$\log_{13} 123$ 1.8803 $\log 47$ 1.7085 $\log_9 94$ 2.3348 $\log_4 168$

$\log_{18} 1$ -2 $\log_6 \frac{1}{36}$ $\frac{1}{2}$ $\log_{81} 3$ 2.0539 $\log_9 44$

\log_{128} 6 $\log_{400} 20$ 5 End! 😊 $\log_{12} 81$

\log_{128} 6 $\log_{400} 20$ 5 End! 😊 $\log_{12} 81$

Version 3: Mixed - Evaluating Logarithms

