

Logarithmic Equations Puzzle

All bases are positive.

Cut out the squares. Arrange them so that touching edges are equivalent equations.

Rubric: 20 points total:

	Exemplary (5 points)	Satisfactory (3 points)	Unsatisfactory (0 points)
Puzzle is mathematically correct.			
Assignment is neatly completed with neat cutouts and glued pieces.			
Assignment is turned in on time.		X	
Rubric is submitted with project.		X	
BONUS: Add an extra set of squares around the perimeter by creating puzzle pieces that fit the outer equations.			

$\log_6 x = 17$ $\log_6 \sqrt[4]{x} = \frac{1}{2}$ $\log_3 x = 5$ $x = 11$ $\log_{17} x = 6$ $x = 12$	$x = 11$ $\log_x 1000 = 3$ $x = 7$	$x = 6$ $\log_5 x = 7$ $\log_5 125 = x$ $x = \frac{1}{2}$	$x = 8$ $\log_8 2 = x$ $\log_2 x = 5$ $x = 7$
$x = 81$ $\log_{10} 0.001 = x$ $\log_{\sqrt{2}} x = 6$ $x = 4$	$x = 243$ $\log_9 27 = x$ $\log_x 16 = 2$ $x = -1$	$x = 13$ $\log_{\sqrt{3}} 729 = x$ $\log_2 .5 = x$ $\log_7 x = 21$ $\log_{\sqrt{5}} \frac{1}{5} = x$	$x = 9$ $\log_{11} 121 = x$ $x = 6$ $x = \frac{1}{4}$
$\log_{\frac{1}{2}} \frac{1}{4} = x$ $\log_{27} x = \frac{2}{3}$ $x = 4$	$\log_8 16 = x$ $\log_{23} 1 = x$ $x = -1$	$\log_{\sqrt{5}} \frac{1}{5} = x$ $\log_{16} 8 = x$ $x = 27$	$x = 10$ $\log_2 64 = x$ $x = \frac{5}{4}$ $x = \frac{3}{2}$
$\log_{\frac{1}{8}} 81 = x$ $\log_{55} x = 0$ $x = 0$	$\log_8 \sqrt{3} = \frac{1}{6}$ $\log_{\sqrt{3}} x = 8$ $x = \frac{3}{4}$	$\log_8 x = 3$ $x = 3$ $x = \frac{4}{5}$	$\log_{81} 3 = x$ $\log_4 x = 6$ $x = 1$ $x = \frac{1}{3}$