

1.63

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$$\log_p x + \log_{px} x > 0$$

$p > 1$

$$\log_p x + \frac{1}{\log_x p} > 0$$

$\log_x p > 0$
 $x > 0$

$$\log_p x + \frac{1}{\log_x p + \log_x x} > 0$$

$\log_p x = t$ (NO)

$$0 < t + \frac{1}{\frac{1}{t} + 1} = t + \frac{1}{\frac{1+t}{t}} = t + \frac{t}{1+t}$$

$$0 < \frac{t+t^2+t}{1+t} = \frac{t(t+2)}{1+t}$$

$\frac{+}{-2} \frac{+}{-1} \frac{+}{0}$

$$-2 < t < -1 \rightarrow -2 < \log_p x < -1 \rightarrow p^{-2} x < p^{-1}$$

$$t > 0 \rightarrow \log_p x > 0 \rightarrow x > 1$$

$p^{-2} x < p^{-1}$
 $x > 1$