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ALGEBRA 2 · 5 MINUTES · START RIGHT AWAY

Lesson 6-3e

Solve Equations With Logarithms

Name _____ Date _____ Per _____

1 FLUENCY

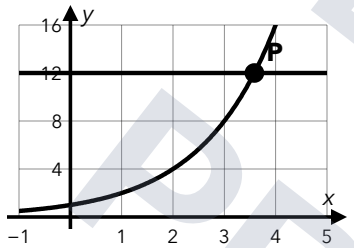
Solve. Round to the nearest thousandth if needed.

$\log_2 x = 5 \rightarrow x =$ ☐

$3 \cdot 10^x = 600 \rightarrow x =$ ☐

2 VISUAL MODEL

The graphs of $y = 2^x$ and $y = 12$ meet at point **P**. Estimate x at **P**, then solve $2^x = 12$ with logs.



Estimate: ☐

$x =$ ☐

$\approx$ ☐

3 APPLICATION

The loudness of a sound in decibels is $L = 10 \log R$, where R is how many times more intense it is than the faintest sound. A vacuum cleaner is 70 dB. Find R.

$R =$ ☐ $=$ _____

WORK

4 REASONING

Raj solves $2 \cdot 10^x = 50$ by writing $x = \frac{\log 50}{2} \approx 0.849$. Is he correct? Find the correct x.

Yes or **No** $x =$ ☐

_____

*We don't divide our effort, we **multiply** it!*

✎ Show your work ✓ Check your work ★ Try your best

Preview - the full worksheet and its answer key are at primeworksheet.com