Sec 8.3 Evaluating Logarithms

Recall:

Solving exponential functions in grade 11:

$2^x = 32$ $4^{x+1} = 8$

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Solving logarithms is based on the same concepts.

EX:

$\log_4 64$ $\log_3\left(\frac{1}{27}\right)$

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What about one that doesn't solve exactly?

$$\log_5 47$$

Graphically

Guess and Check

graph to solve log.gsp

Note: There is a better way that we will learn shortly!

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In your calculator, the "log" button means "log base 10" only.

See EX 4 on page 464.

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Notice the general properties on p464 Ex 5.

$$\log_a 1 = 0$$

$$\log_a a = 1$$

$$\log_a a^x = x$$

tricky →

$$a^{\log_a x} = x$$

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Homework:
p466 #1-6, 15

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Attachments

graph to solve log.gsp