Precalculus
Compute logarithm using the rule
$$\log_a(b) - \log_a(c) = \log_a\left(\frac{b}{c}\right)$$

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Use the properties of logarithms to evaluate the following.

Example

$$
\begin{aligned}
\log_4 2 + \log_4 32 &= \log_4(2 \cdot 32) \\
&= \log_4(64) \\
&= 3 \\
&\quad \text{(because } 4^3 = 64.\text{)}
\end{aligned}
$$

Example

$$
\begin{aligned}
\log_2 80 - \log_2 5 &= \log_2\left(\frac{80}{5}\right) \\
&= \log_2(16) \\
&= 4 \\
&\quad \text{(because } 2^4 = 16.\text{)}
\end{aligned}
$$