C12 - 8.4 - $\log_b m + \log_b n = \log_b mn, \log_b m - \log_b n = \log_b \frac{m}{n}$ HW

Simplify, express as a single log

$log3 + log4 =$ $\log_2 5 + \log_2 6 =$ $\log_3 20 - \log_3 4 =$

$2\log_4 8 - \log_4 16 =$ $log32 - 3log2 =$ $\log_2 5 + \log_2 3 + \log_2 4 =$

$\log_2 4 + \log_2 5 - 2\log_2 10 =$ $\log_3 4 + 2\log_3 20 - \log_3 10 =$

$log5 - log2 - log10 =$ $log5 - log2 + log10 =$

$log4 - log2 + log10 =$ $-log8 - log2 + log5 =$

Express as an addition of logs

$\log(4 \times 3) =$ $\log(2 \times 5 \times 7)$ $log4 =$ $log9 =$

$log10 =$ $log15 =$ $log21 =$ $log25 =$

$log30 =$ $log36 =$ $log20 =$

Express as a subtraction of logs

$\log\left(\frac{10}{3}\right) =$ $\log\left(\frac{3}{2}\right) =$ $log5 =$ $log7 =$

$\log 0.1 =$ $log0.5$

Express in terms of $\log a, \log b, \log c$

$\log ab =$

$\log\left(\dfrac{b}{c}\right) =$

$\log\left(\dfrac{a}{bc}\right) =$

$\log\left(\dfrac{ab}{c}\right) =$

$\log 100a^2 b^3 =$

$\log_4 \dfrac{16a^2}{c} =$

$\log\left(\dfrac{a^3}{b\sqrt{c}}\right) =$

$\log\dfrac{c^2}{10a^2} =$

$\log(bc)^2 =$

$\log(a\sqrt{b}) =$

$\log(\sqrt{ab}) =$

C12 - 8.4 - $\log_b m + \log_b n = \log_b mn \quad log_b\, m - log_b\, n = log_b \frac{m}{n}$ HW

Express in terms of $log3$ and $log4$.

$log12 =$ $\qquad$ $log36 =$ $\qquad$ $log48 =$ $\qquad$ $log120 =$

$log0.12 =$ $\qquad$ $log\dfrac{9}{16} =$

Simplify the expression.

$\log(x + 1) + \log 2 =$ $\qquad$ $\log(x^2) - logx =$ $\qquad$ $\log n^2 - 2log\sqrt{n} =$

$log\sqrt{m} + \log m^{\frac{3}{2}} =$ $\qquad$ $\log_2 x - 2\log_2 8 =$ $\qquad$ $\log_3 x + 2\log_3 4 =$

$\log(x + 2) + \log(x + 3) =$ $\qquad$ $\log(x^2 + 5x + 6) - \log(x + 3) =$

C12 - 8.4 - $log2 = m, log3 = n, HW$

Given: $log2 = m$ $log3 = n$ *Solve in terms of m and n:*

$log4 =$

$log6 =$

$log8 =$

$log24 =$

$log18 =$

$log12 =$

$log20 =$

$log600 =$

$log0.3 =$

$log2x =$

$log9x =$

$log0.02 =$

$log1.5 =$

$log0.\bar{6}$

$log1.08 =$

$log0.06 =$

$log0.54 =$

$log5 =$

$log_{\frac{1}{2}} 216$

$log_{12} 72 =$

$log_6 1728$

Given: $log9 = a$ $log25 = b$ *Solve in terms of a and b:*

$log3 =$

$log15 =$

$log\frac{3}{5} =$

$log300 =$

$log1.\bar{6} =$