

Student Name: _____

Score: _____

Rewrite as Single Logarithm Using Product and Quotient Rule

Problems

Work Space

$\log_a x + \log_a y - \log_a z$ Answer:	
$\log_s l^4 m^2 + \log_s n - \log_s lmn$ Answer:	
$\log_h \frac{x}{y} + \log_h \frac{y}{z} - \log_h \frac{z}{y}$ Answer:	
$\log_d ab + \log_d bc - \log_d ca$ Answer:	
$\log_s(m + n) + \log_s(l + m) - \log_s m$ Answer:	

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Answers

$\log_a x + \log_a y - \log_a z$	
Answer: $\log_a \frac{xy}{z}$	
$\log_s l^4 m^2 + \log_s n - \log_s lmn$	
Answer: $\log_s l^3 m$	
$\log_h \frac{x}{y} + \log_h \frac{y}{z} - \log_h \frac{z}{y}$	
Answer: $\log_h \frac{xy}{z^2}$	
$\log_d ab + \log_d bc - \log_d ca$	
Answer: $\log_d b^2$	
$\log_s(m+n) + \log_s(l+m) - \log_s m$	
Answer: $\log_s \frac{(m+n)(l+m)}{m}$	