

Student Name: \_\_\_\_\_

Score: \_\_\_\_\_

**Rewrite as Single Logarithm Using Quotient Rule**

Problems

Work Space

$\log_m s - \log_m t$  Answer:	
$\log_a x^3 y - \log_a xy^2$  Answer:	
$\log_b(9x^2 - 16) - \log_b(3x + 4)$  Answer:	
$\log_t \frac{4x}{3y} - \log_t \frac{4x}{9y^5}$  Answer:	
$\log_y m^3 - \log_y n^2 m^2$  Answer:	

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### Answers

$\log_m s - \log_m t$	
Answer: $\log_m \frac{s}{t}$	
$\log_a x^3 y - \log_a xy^2$	
Answer: $\log_a \frac{x^2}{y}$	
$\log_b(9x^2 - 16) - \log_b(3x + 4)$	
Answer: $\log_b(3x - 4)$	
$\log_t \frac{4x}{3y} - \log_t \frac{4x}{9y^5}$	
Answer: $\log_t 3y^4$	
$\log_y m^3 - \log_y n^2 m^2$	
Answer: $\log_y \frac{m}{n^2}$	