



Condensing Logarithms

Version 2

Name: _____

Date: _____

Score: _____

Direction: Simplify by combining or condensing the logarithmic expressions. Show all your answer in the space provided.

1) $\log_5(a) - \log_5(b) + \log_5(c) - \log_5(d)$

2) $3\log_6(5x^2) - \log_6(25x^3)$

3) $\log(2y) + 3\log(4y^4) - \log(8y^4)$

4) $\frac{2}{3}\log_4(8m^6) - \frac{1}{2}\log_4(64m^2) + 1$



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1) $\log_5(a) - \log_5(b) + \log_5(c) - \log_5(d)$

$$\log_5\left(\frac{ac}{bd}\right)$$

2) $3\log_6(5x^2) - \log_6(25x^3)$

$$\log_6(5x^3)$$

3) $\log(2y) + 3\log(4y^4) - \log(8y^4)$

$$\log(16y)$$

4) $\frac{2}{3}\log_4(8m^6) - \frac{1}{2}\log_4(64m^2) + 1$

$$\log_4(2m^3)$$