



# Condensing Logarithms

Version 1

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

Date: \_\_\_\_\_

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

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

1)  $\log_2(x) + \log_2(y) - \log_2(z) - \log_2(m)$

2)  $2\log_5(x^4) - 3\log_5(x)$

3)  $6\log_7(x) + 3\log_7(2x) - \log_7(4x^5)$

4)  $\frac{1}{2}\log_2(16y^6) + \log_2(3) - \log_2(y) - 2$



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1)  $\log_2(x) + \log_2(y) - \log_2(z) - \log_2(m)$

$$\log_2\left(\frac{xy}{zm}\right)$$

2)  $2\log_5(x^4) - 3\log_5(x)$

$$\log_5(x^5)$$

3)  $6\log_7(x) + 3\log_7(2x) - \log_7(4x^5)$

$$\log_7(2x^4)$$

4)  $\frac{1}{2}\log_2(16y^6) + \log_2(3) - \log_2(y) - 2$

$$\log_2(3y^2)$$