

# Properties of Logarithms

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Write the property of logarithms that each equation demonstrates.

1)  $\log_4 10^2 = 2 \log_4 10$

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2)  $\log_9 13 + \log_9 3 = \log_9 39$

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3)  $\log 121 - \log 11 = \log 11$

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4)  $8 \log_3 7 = \log_3 7^8$

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5)  $\log_6 8 + \log_6 4 = \log_6 32$

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6)  $\log_2 5 - \log_2 9 = \log_2 \left(\frac{5}{9}\right)$

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7) Which property of logarithms does this equation demonstrate  $\log 12 + \log 7 = \log 84$  ?

a) Product Property

b) Power Property

c) Quotient Property

8) Which property of logarithms does this equation demonstrate  $6 \log_5 2 = \log_5 2^6$  ?

a) Quotient Property

b) Product Property

c) Power Property