

Properties of Logarithms

Write the property of logarithms that each equation demonstrates.

1) $\log_6 24 - \log_6 12 = \log_6 2$

2) $5 \log_9 3 = \log_9 3^5$

3) $\log_2 8 + \log_2 7 = \log_2 56$

4) $\log_5 9 - \log_5 4 = \log_5 \left(\frac{9}{4}\right)$

5) $\log_3 6^4 = 4 \log_3 6$

6) $\log 15 + \log 10 = \log 150$

7) Which property of logarithms does this equation demonstrate $\log_3 36 - \log_3 4 = \log_3 9$?

a) Power Property

b) Quotient Property

c) Product Property

8) Which property of logarithms does this equation demonstrate $\log_4 2 + \log_4 8 = \log_4 16$?

a) Product Property

b) Power Property

c) Quotient Property