



Apply logarithm laws

- 1** Convert the given logarithm to its equivalent based on the quotient property

$$\log_p \frac{n}{x}$$

A $\log_p x - \log_p n$

B $\log_p n - \log_p x$

- 2** Use the product rule to simplify this to a quadratic and solve for 'w'

$$\log_8(w+2) + \log_8(w-3) = \log_8(6)$$

A $w = 4$

B $w = -2$

C $w = 11$

- 3** Use the product rule to simplify this to a quadratic and solve for 't'

$$\log_2(9t+6) + \log_2(3t+1) = \log_2(6)$$

A $t = -10$

B $t = 0$

C $t = 2$

- 4** Use the quotient rule to simplify this to a quadratic of variable 'r'

$$\log_4(r+10) - \log_4(r-2) = \log_4(1r)$$

A $-1r^2 + 3r + 10 = 0$

B $-2r^2 + 1r + 10 = 0$

C $-2r^2 + 5r + 7 = 0$

- 5** Use the quotient rule to simplify this to a quadratic and solve for 'n'

$$\log_{10}(-5n+7) - \log_{10}(-7n+9) = \log_{10}(1n)$$

A $n = -6$

B $n = 1$

C $n = 2$

- 6** Use the product rule to simplify this to a quadratic of variable 'z'

$$\log_6(z+1) + \log_6(z+8) = \log_6(8)$$

A $z^2 + 7z + 2 = 0$

B $z^2 + 10z - 3 = 0$

C $z^2 + 9z + 0 = 0$

- 7** Convert the given logarithm to its equivalent based on the power property

$$\log_3 81$$

A $2\log_3 9$

B $3\log_9 2$

C $3\log_2 9$

D $2\log_9 3$

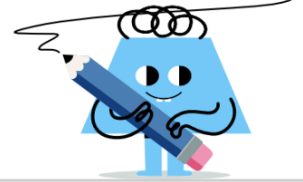
- 8** Convert the given logarithm to its equivalent based on the power property

$$3\log_9 5$$

A $\log_9 3^5$

B $\log_9 5^3$

C $\log_5 9^3$

**Apply logarithm laws****9**

Convert the given logarithm to its equivalent based on the power property

$$2\log_7 10$$

A $\log_7 100$

B $\log_{100} 7$

C $\log_7 99$

D $\log_7 101$

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Use the power rule to simplify this to an equation with variable 'w'

$$2\log_7(w-4) = \log_7(4)$$

A $2(w-4) = 16$

B $(w-4)^2 = 16$

C $(w-8) = 16$

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Convert the given logarithm to its equivalent based on the product property

$$\log_3 40$$

A $\log_3 8 + \log_3 5$

B $\log_5 8 + \log_5 3$

C $\log_3 7 + \log_3 12$

D $\log_3 7 + \log_3 11$

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Convert the given logarithm to its equivalent based on the product property

$$\log_m p + \log_m q$$

A $\log_m(p \cdot q)$

B $\log_q(m \cdot p)$

C $\log_m \frac{p}{q}$

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Convert the given logarithm to its equivalent based on the product property

$$\log_8(10 \cdot 4)$$

A $\log_{10} 8 + \log_{10} 4$

B $\log_{10} 4 + \log_{10} 8$

C $\log_4 10 + \log_4 8$

D $\log_8 10 + \log_8 4$

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Convert the given logarithm to its equivalent based on the power property

$$\log_6 4^2$$

A $2\log_6 4$

B $6\log_2 4$

C $6\log_4 2$

D $2\log_4 6$