



## Logarithm Algebra (Quotient Property) - To Quadratic (Coefficient N)

$$\log_4(9w + 4) - \log_4(w + 6) = \log_4(1w)$$

Use the quotient rule to simplify this to a quadratic of variable 'w'

A

$$-1w^2 + 2w + 2 = 0$$

B

$$-2w^2 + 3w + 8 = 0$$

C

$$-1w^2 + 3w + 4 = 0$$

$$\log_3(-8z + 10) - \log_3(z + 1) = \log_3(1z)$$

Use the quotient rule to simplify this to a quadratic of variable 'z'

A

$$0z^2 - 7z + 12 = 0$$

B

$$-2z^2 - 9z + 11 = 0$$

C

$$-1z^2 - 9z + 10 = 0$$

$$\log_9(-6n + 10) - \log_9(10n - 6) = \log_9(1n)$$

Use the quotient rule to simplify this to a quadratic of variable 'n'

A

$$-11n^2 + 1n + 7 = 0$$

B

$$-10n^2 + 2n + 7 = 0$$

C

$$-10n^2 + 0n + 10 = 0$$

$$\log_7(-5m - 1) - \log_7(m + 5) = \log_7(-1m)$$

Use the quotient rule to simplify this to a quadratic of variable 'm'

A

$$m^2 + 0m - 1 = 0$$

B

$$0m^2 + 0m - 4 = 0$$

C

$$0m^2 + 1m - 2 = 0$$

$$\log_4(-3r + 9) - \log_4(r + 5) = \log_4(1r)$$

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

A

$$-1r^2 - 8r + 9 = 0$$

B

$$0r^2 - 7r + 13 = 0$$

C

$$-1r^2 - 10r + 12 = 0$$

$$\log_6(10w - 4) - \log_6(-2w + 5) = \log_6(2w)$$

Use the quotient rule to simplify this to a quadratic of variable 'w'

A

$$4w^2 + 0w - 4 = 0$$

B

$$5w^2 + 2w - 2 = 0$$

C

$$5w^2 - 2w - 3 = 0$$

$$\log_2(3p + 4) - \log_2(-2p - 1) = \log_2(-1p)$$

Use the quotient rule to simplify this to a quadratic of variable 'p'

A

$$-2p^2 + 0p + 7 = 0$$

B

$$-2p^2 + 3p + 2 = 0$$

C

$$-2p^2 + 2p + 4 = 0$$

$$\log_2(2x + 5) - \log_2(x + 4) = \log_2(-1x)$$

Use the quotient rule to simplify this to a quadratic of variable 'x'

A

$$2x^2 + 8x + 4 = 0$$

B

$$x^2 + 6x + 5 = 0$$

C

$$x^2 + 5x + 8 = 0$$