



Logarithm Algebra (Quotient Property) - To Quadratic (Coefficient 1)

$${}^1\log_9(m + 10) - \log_9(m + 6) = \log_9(-1m)$$

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

A	B	C
$m^2 + 7m + 10 = 0$	$2m^2 + 5m + 8 = 0$	$m^2 + 8m + 14 = 0$

$${}^2\log_9(x + 9) - \log_9(x - 7) = \log_9(1x)$$

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

A	B	C
$-1x^2 + 8x + 11 = 0$	$-1x^2 + 7x + 12 = 0$	$-1x^2 + 8x + 9 = 0$

$${}^3\log_2(p + 4) - \log_2(p + 3) = \log_2(-1p)$$

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

A	B	C
$p^2 + 3p + 6 = 0$	$2p^2 + 5p + 3 = 0$	$p^2 + 4p + 4 = 0$

$${}^4\log_7(x + 9) - \log_7(x + 9) = \log_7(1x)$$

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

A	B	C
$-1x^2 - 8x + 9 = 0$	$x^2 - 7x + 10 = 0$	$-1x^2 - 9x + 6 = 0$

$${}^5\log_{10}(p + 2) - \log_{10}(p + 2) = \log_{10}(-1p)$$

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

A	B	C
$p^2 + 3p + 2 = 0$	$p^2 + 2p + 1 = 0$	$2p^2 + 2p + 4 = 0$

$${}^6 \text{ Use the quotient rule to simplify this to a quadratic of variable 'm'}$$

$$\log_8(m + 9) - \log_8(m + 5) = \log_8(-1m)$$

A	$m^2 + 4m + 13 = 0$
B	$m^2 + 6m + 9 = 0$

$${}^7\log_8(y + 10) - \log_8(y + 10) = \log_8(-1y)$$

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

A	B	C
$y^2 + 11y + 10 = 0$	$y^2 + 13y + 8 = 0$	$y^2 + 12y + 7 = 0$

$${}^8\log_{10}(n + 9) - \log_{10}(n + 5) = \log_{10}(-1n)$$

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

A	B	C
$n^2 + 4n + 11 = 0$	$n^2 + 6n + 9 = 0$	$n^2 + 6n + 11 = 0$