



## Logarithm Algebra (Product Property) - To Answer (Coefficient N)

$$1 \log_5(2x + 1) + \log_5(8x + 4) = \log_5(4)$$

Use the product rule to simplify this to a quadratic and solve for 'x'

A	B	C
$x = -9$	$x = -2$	$x = 0$

$$2 \log_4(-1n + 2) + \log_4(-2n + 4) = \log_4(8)$$

Use the product rule to simplify this to a quadratic and solve for 'n'

A	B	C
$n = -8$	$n = 9$	$n = 0$

$$3 \log_2(-1z + 7) + \log_2(-1z + 7) = \log_2(4)$$

Use the product rule to simplify this to a quadratic and solve for 'z'

A	B	C
$z = -2$	$z = 5$	$z = 6$

$$4 \log_9(-1r - 3) + \log_9(-1r - 8) = \log_9(6)$$

Use the product rule to simplify this to a quadratic and solve for 'r'

A	B	C
$r = -9$	$r = -19$	$r = -1$

$$5 \log_{10}(-2x - 8) + \log_{10}(-1x - 3) = \log_{10}(4)$$

Use the product rule to simplify this to a quadratic and solve for 'x'

A	B	C
$x = 3$	$x = -5$	$x = -7$

$$6 \log_3(x - 7) + \log_3(x - 3) = \log_3(5)$$

Use the product rule to simplify this to a quadratic and solve for 'x'

A	B	C
$x = 17$	$x = 8$	$x = 14$

$$7 \log_7(2w + 9) + \log_7(-2w - 1) = \log_7(7)$$

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

A	B	C
$w = -4$ $w = -1$	$w = -14$ $w = 8$	$w = -12$ $w = 7$

$$8 \text{ Use the product rule to simplify this to a quadratic and solve for 'm'}$$

$$\log_8(2m + 8) + \log_8(m + 5) = \log_8(4)$$

A	B
$m = 1$	$m = -3$