



## Logarithm Algebra (Product Property) - To Answer (Coefficient 1)



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

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

A	B	C
$r = 6$	$r = 15$	$r = -1$

$$^2 \log_5(x + 9) + \log_5(x + 8) = \log_5(2)$$

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

A	B	C
$x = -1$	$x = -2$	$x = -7$

$$^3 \log_{10}(x + 3) + \log_{10}(x + 5) = \log_{10}(3)$$

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

A	B	C
$x = 1$	$x = -2$	$x = -6$

$$^4 \log_8(z - 4) + \log_8(z - 4) = \log_8(1)$$

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

A	B	C
$z = 2$	$z = 5$	$z = -1$

$$^5 \log_8(x + 5) + \log_8(x + 9) = \log_8(5)$$

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

A	B	C
$x = 5$	$x = 3$	$x = -4$

$^6$  Use the product rule to simplify this to a quadratic and solve for 'r'

$$\log_7(r - 3) + \log_7(r + 5) = \log_7(9)$$

A	B
$r = 9$	$r = 4$

$$^7 \log_5(q - 4) + \log_5(q - 5) = \log_5(6)$$

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

A	B	C
$q = 7$	$q = 11$	$q = 3$

$$^8 \log_6(m + 2) + \log_6(m - 6) = \log_6(9)$$

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

A	B	C
$m = 7$	$m = -1$	$m = 15$