



Logarithm Algebra (Product Property) - To Quadratic (Coefficient N)

$$1 \log_7(-2w + 3) + \log_7(2w + 5) = \log_7(7) \quad 2 \log_{10}(5q + 8) + \log_{10}(5q + 7) = \log_{10}(6)$$

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

Use the product rule to simplify this to a quadratic of variable 'q'

A

B

C

$$-4w^2 - 4w + 8 = 0$$

$$-3w^2 - 3w + 10 = 0$$

$$-3w^2 - 4w + 7 = 0$$

A

B

C

$$25q^2 + 75q + 50 = 0$$

$$25q^2 + 75q + 48 = 0$$

$$25q^2 + 76q + 53 = 0$$

$$3 \log_3(4q + 3) + \log_3(-4q + 3) = \log_3(9) \quad 4 \log_4(-3t - 5) + \log_4(-6t - 8) = \log_4(4)$$

Use the product rule to simplify this to a quadratic of variable 'q'

Use the product rule to simplify this to a quadratic of variable 't'

A

B

C

$$-16q^2 + 0q + 0 = 0$$

$$-16q^2 + 2q + 3 = 0$$

$$-17q^2 + 0q - 3 = 0$$

A

B

C

$$17t^2 + 52t + 40 = 0$$

$$18t^2 + 54t + 36 = 0$$

$$19t^2 + 56t + 33 = 0$$

$$5 \log_2(-1y - 3) + \log_2(y + 9) = \log_2(8) \quad 6 \log_{10}(4w - 8) + \log_{10}(w - 1) = \log_{10}(8)$$

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

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

A

B

C

$$-1y^2 - 12y - 35 = 0$$

$$-1y^2 - 14y - 34 = 0$$

$$-2y^2 - 13y - 35 = 0$$

A

B

C

$$4w^2 - 12w + 3 = 0$$

$$3w^2 - 11w + 3 = 0$$

$$4w^2 - 12w + 0 = 0$$

$$7 \log_3(y + 3) + \log_3(-8y - 8) = \log_3(8) \quad 8 \log_{10}(2t - 4) + \log_{10}(t + 1) = \log_{10}(8)$$

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

Use the product rule to simplify this to a quadratic of variable 't'

A

B

C

$$-9y^2 - 31y - 35 = 0$$

$$-7y^2 - 31y - 31 = 0$$

$$-8y^2 - 32y - 32 = 0$$

A

B

C

$$2t^2 - 2t - 12 = 0$$

$$2t^2 - 4t - 11 = 0$$

$$3t^2 - 2t - 14 = 0$$