



## Logarithm Algebra (Power Property) - Isolate Exponent, One Binomial (Coefficient N) to Partial Answer

1

Use the power rule to simplify this equation  $4^{(-1z+3)} = 3^{(-7z)}$

Use the power rule to simplify this equation  $3^{(7x-5)} = 7^{(-4x)}$

$$\begin{matrix} \text{A} \\ (-1z + 3) \ln 4 = (-7z) \ln 3 \end{matrix} \quad \begin{matrix} \text{B} \\ (-1z - 3) \ln 4 = (-7z - 2) \ln 3 \end{matrix} \quad \begin{matrix} \text{A} \\ (7x - 5) \ln 3 = (-4x) \ln 7 \end{matrix} \quad \begin{matrix} \text{B} \\ (7x + 5) \ln 3 = (-4x - 2) \ln 7 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (3z - 1) \ln 4 = (2z - 7) \ln 3 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (-5x + 7) \ln 3 = (2x - 4) \ln 7 \end{matrix}$$

3

Use the power rule to simplify this equation  $5^{(5n+4)} = 10^{(-3n)}$

4

Use the power rule to simplify this equation  $10^{(-5n+3)} = 7^{(-5n)}$

$$\begin{matrix} \text{A} \\ (4n + 5) \ln 5 = (2n - 3) \ln 10 \end{matrix} \quad \begin{matrix} \text{B} \\ (5n - 4) \ln 5 = (-3n - 2) \ln 10 \end{matrix} \quad \begin{matrix} \text{A} \\ (3n - 5) \ln 10 = (2n - 5) \ln 7 \end{matrix} \quad \begin{matrix} \text{B} \\ (-5n + 3) \ln 10 = (-5n) \ln 7 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (5n + 4) \ln 5 = (-3n) \ln 10 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (-5n - 3) \ln 10 = (-5n - 2) \ln 7 \end{matrix}$$

5

Use the power rule to simplify this equation  $4^{(-1z-5)} = 7^{(-7z)}$

6

Use the power rule to simplify this equation  $8^{(-8q-2)} = 9^{(-7q)}$

$$\begin{matrix} \text{A} \\ (-5z - 1) \ln 4 = (2z - 7) \ln 7 \end{matrix} \quad \begin{matrix} \text{B} \\ (-1z - 5) \ln 4 = (-7z) \ln 7 \end{matrix} \quad \begin{matrix} \text{A} \\ (-8q + 2) \ln 8 = (-7q - 2) \ln 9 \end{matrix} \quad \begin{matrix} \text{B} \\ (-8q - 2) \ln 8 = (-7q) \ln 9 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (-1z + 5) \ln 4 = (-7z - 2) \ln 7 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (-2q - 8) \ln 8 = (2q - 7) \ln 9 \end{matrix}$$

7

Use the power rule to simplify this equation  $6^{(5p-3)} = 7^{(3p)}$

8

Use the power rule to simplify this equation  $3^{(-7y-6)} = 8^{(5y)}$

$$\begin{matrix} \text{A} \\ (5p + 3) \ln 6 = (3p - 2) \ln 7 \end{matrix} \quad \begin{matrix} \text{B} \\ (-3p + 5) \ln 6 = (2p + 3) \ln 7 \end{matrix} \quad \begin{matrix} \text{A} \\ (-7y + 6) \ln 3 = (5y - 2) \ln 8 \end{matrix} \quad \begin{matrix} \text{B} \\ (-7y - 6) \ln 3 = (5y) \ln 8 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (5p - 3) \ln 6 = (3p) \ln 7 \end{matrix}$$

$$\begin{matrix} \text{C} \\ (-6y - 7) \ln 3 = (2y + 5) \ln 8 \end{matrix}$$