Name

Logarithm Algebra (Power Property) - Isolote Exponent, Two Binomials (Coefficient N) to Answer

1 Use the power rule to simplify this and solve for 'z'

$$3^{(-3z-3)} = 6^{(-9z+9)}$$

A	$z = \frac{9\ln 3 + 3\ln 6}{-3\ln 6 + 9\ln 3}$	B	$z = \frac{9\ln 6 + 3\ln 3}{-3\ln 3 + 9\ln 6}$
C	$z = \frac{-9\ln 6 + 3\ln 3}{-3\ln 3 - 9\ln 6}$		

2 Use the power rule to simplify this and solve for 'p'

$$10^{(-3p+4)} = 2^{(-6p-6)}$$

A	$p = \frac{-6\ln 10 - 4\ln 2}{-3\ln 2 + 6\ln 10}$	B	$p = \frac{-6\ln 2 - 4\ln 10}{-3\ln 10 + 6\ln 2}$
C	$p = \frac{-6\ln 2 + 3\ln 10}{4\ln 10 + 6\ln 2}$		

3 Use the power rule to simplify this and solve for 't'

$$7^{(-1t+2)} = 4^{(5t+9)}$$

A	$t = \frac{5\ln 4 + \ln 7}{2\ln 7 - 9\ln 4}$	B	$t = \frac{9\ln 7 - 2\ln 4}{-1\ln 4 - 5\ln 7}$
C	$t = \frac{9\ln 4 - 2\ln 7}{-1\ln 7 - 5\ln 4}$		

4 Use the power rule to simplify this and solve for 'x'

$$7^{(-3x+9)} = 5^{(-9x-4)}$$

A	$x = \frac{-4\ln 7 - 9\ln 5}{-3\ln 5 + 9\ln 7}$	B	$x = \frac{-9\ln 5 + 3\ln 7}{9\ln 7 + 4\ln 5}$
C	$x = \frac{-4\ln 5 - 9\ln 7}{-3\ln 7 + 9\ln 5}$		

5 Use the power rule to simplify this and solve for 'r'

$$7^{(-8r-6)} = 4^{(-4r+6)}$$

A	$r = \frac{6\ln 7 + 6\ln 4}{-8\ln 4 + 4\ln 7}$	B	$r = \frac{-4\ln 4 + 8\ln 7}{-6\ln 7 - 6\ln 4}$
C	$r = \frac{6\ln 4 + 6\ln 7}{-8\ln 7 + 4\ln 4}$		

6 Use the power rule to simplify this and solve for 'p'

$$5^{(2p+9)} = 8^{(2p+9)}$$

A	$p = \frac{2\ln 8 - 2\ln 5}{9\ln 5 - 9\ln 8}$	B	$p = \frac{9\ln 5 - 9\ln 8}{2\ln 8 - 2\ln 5}$
C	$p = \frac{9\ln 8 - 9\ln 5}{2\ln 5 - 2\ln 8}$		

7 Use the power rule to simplify this and solve for 'n'

$$2^{(7n-1)} = 7^{(-5n-6)}$$

A	$n = \frac{-6\ln 2 + 1\ln 7}{7\ln 7 + 5\ln 2}$	B	$n = \frac{-5\ln 7 - 7\ln 2}{-1\ln 2 + 6\ln 7}$
C	$n = \frac{-6\ln 7 + \ln 2}{7\ln 2 + 5\ln 7}$		

8 Use the power rule to simplify this and solve for 'p'

$$9^{(-6p+4)} = 2^{(p+7)}$$

A	$p = \frac{7\ln 9 - 4\ln 2}{-6\ln 2 - \ln 9}$	B	$p = \frac{7\ln 2 - 4\ln 9}{-6\ln 9 - 1\ln 2}$
C	$p = \frac{\ln 2 + 6\ln 9}{4\ln 9 - 7\ln 2}$		