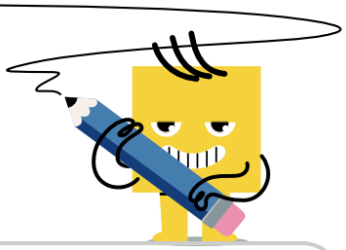
Name



Logarithm Algebra (Power Property) - Isolote Exponent, One Binomial (Coefficient N) to Answer

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

$$6^{(-6q+3)} = 3^{(3q)}$$

A	$q = \frac{-3\ln 6}{-6\ln 6 - 3\ln 3}$	B	$q = \frac{-3\ln 3}{-6\ln 3 - 3\ln 6}$
C	$q = \frac{3\ln 3 + 6\ln 6}{3\ln 6 - 2\ln 3}$		

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

$$7^{(-7z-7)} = 6^{(-7z)}$$

A	$z = \frac{-7\ln 6 + 7\ln 7}{-7\ln 7 - 2\ln 6}$	B	$z = \frac{7\ln 6}{-7\ln 6 + 7\ln 7}$
C	$z = \frac{7\ln 7}{-7\ln 7 + 7\ln 6}$		

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

$$5^{(-1x-2)} = 10^{(-2x)}$$

A	$x = \frac{2\ln 5}{-1\ln 5 + 2\ln 10}$	B	$x = \frac{2\ln 10}{-1\ln 10 + 2\ln 5}$
C	$x = \frac{-2\ln 10 + \ln 5}{-2\ln 5 - 2\ln 10}$		

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

$$3^{(-8m+9)} = 2^{(8m)}$$

A	$m = \frac{-9\ln 3}{-8\ln 3 - 8\ln 2}$	B	$m = \frac{8\ln 2 + 8\ln 3}{9\ln 3 - 2\ln 2}$
C	$m = \frac{-9\ln 2}{-8\ln 2 - 8\ln 3}$		

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

$$9^{(-5t-9)} = 5^{(9t)}$$

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

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

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

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

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

$$4^{(9r+9)} = 10^{(7r)}$$

A	$r = \frac{7\ln 10 - 9\ln 4}{9\ln 4 - 2\ln 10}$	B	$r = \frac{-9\ln 10}{9\ln 10 - 7\ln 4}$
C	$r = \frac{-9\ln 4}{9\ln 4 - 7\ln 10}$		

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

$$2^{(-5t-2)} = 8^{(-8t)}$$

A	$t = \frac{-8\ln 8 + 5\ln 2}{-2\ln 2 - 2\ln 8}$	B	$t = \frac{2\ln 2}{-5\ln 2 + 8\ln 8}$
C	$t = \frac{2\ln 8}{-5\ln 8 + 8\ln 2}$		