



Solve simple exponential equations with common bases

1

Solve for the missing exponent (?)

$$(10^3)^8 = 10000^?$$

A	$? = 11$	B	$? = 7$
C	$? = 10$	D	$? = 8$
E	$? = 6$	F	$? = 12$

2

Solve for the missing exponent (?)

$$1000^4 = 100^?$$

A	$? = 15$	B	$? = 4$
C	$? = 1$	D	$? = 2$
E	$? = 3$	F	$? = 6$

3

Solve for the missing exponent (?)

$$1000^{12} = (10^4)^?$$

A	$? = 7$	B	$? = 9$
C	$? = 4$	D	$? = 13$
E	$? = 1$	F	$? = 3$

4

Solve for x

$$2^x = 4^{26}$$

A	$x = 97$	B	$x = 87$
C	$x = 52$	D	$x = 32$
E	$x = 27$	F	$x = 72$

5

Solve for the missing exponent (x) in reduced form

$$2^n = (2^x)^2$$

A	$x = \frac{n}{2}$	B	$x = 9n$
C	$x = \frac{6}{n}$	D	$x = \frac{1}{2n}$
E	$x = 3n$	F	$x = \frac{2n}{3}$

6

Solve for the missing exponent

$$3^x = \frac{1}{27}$$

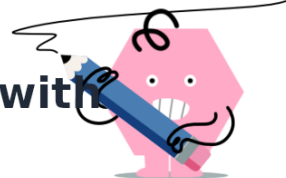
A	$x = -4$	B	$x = -3$
C	$x = -7$	D	$x = 5$
E	$x = 1$	F	$x = 0$

7

Solve for the missing exponent

$$\left(\frac{1}{2}\right)^x = \frac{1}{8}$$

A	$x = 7$	B	$x = -7$
C	$x = 3$	D	$x = 10$
E	$x = -6$	F	$x = -2$



Solve simple exponential equations with common bases

8Simplify and solve for q

$$3^{(2q)} = 81$$

A

$$q = 0$$

B

$$q = 2$$

9Simplify and solve for r

$$4^{(5r-8)} = 64^r$$

A

$$r = 5$$

B

$$r = 3$$

C

$$r = 6$$

D

$$r = 4$$

10Simplify and solve for z

$$4^{(z-7)} = 64$$

A

$$z = 0$$

B

$$z = 10$$

11Simplify and solve for r

$$3^{(3r-7)} = 81^r$$

A

$$r = -7$$

B

$$r = -5$$

C

$$r = -8$$

D

$$r = -6$$

12Simplify and solve for x

$$8^{(x-6)} = 64$$

A

$$x = -1$$

B

$$x = 8$$