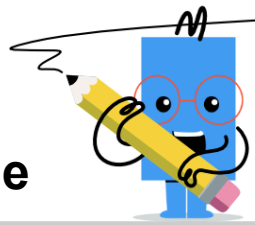
Name



Exponents - Power Law - Composite Base with Variable Power to Prime Base with Unknown Power

1 Solve for the missing exponent (x) in reduced form

$$16^n = 4^x$$

A	B	C	D	E	F
$x = \frac{2}{2n}$	$x = 3n$	$x = n$	$x = \frac{2}{4n}$	$x = \frac{2n}{2}$	$x = 2n$

2 Solve for the missing exponent (x) in reduced form

$$32^n = 2^x$$

A	B	C	D	E	F
$x = 5n$	$x = 3n$	$x = 7n$	$x = n$	$x = \frac{3n}{5}$	$x = \frac{3}{5n}$

3 Solve for the missing exponent (x) in reduced form

$$36^n = 6^x$$

A	B	C	D	E	F
$x = 2n$	$x = \frac{6}{n}$	$x = \frac{2}{2n}$	$x = \frac{2n}{4}$	$x = 8n$	$x = 3n$

4 Solve for the missing exponent (x) in reduced form

$$16^n = 2^x$$

A	B	C	D	E	F
$x = 4n$	$x = \frac{12n}{1}$	$x = \frac{3n}{4}$	$x = \frac{2n}{1}$	$x = \frac{4}{12n}$	$x = \frac{3}{4n}$

5 Solve for the missing exponent (x) in reduced form

$$25^n = 5^x$$

A	B	C	D	E	F
$x = 3n$	$x = \frac{2n}{6}$	$x = \frac{6n}{1}$	$x = 2n$	$x = \frac{5n}{1}$	$x = \frac{3n}{2}$

6 Solve for the missing exponent (x) in reduced form

$$64^n = 4^x$$

A	B	C	D	E	F
$x = \frac{2n}{3}$	$x = \frac{3}{6n}$	$x = \frac{4}{n}$	$x = \frac{2}{3n}$	$x = 2n$	$x = 3n$

7 Solve for the missing exponent (x) in reduced form

$$81^n = 3^x$$

A	B	C	D	E	F
$x = \frac{3n}{1}$	$x = 7n$	$x = n$	$x = 4n$	$x = 2n$	$x = \frac{2}{4n}$

8 Solve for the missing exponent (x) in reduced form

$$9^n = 3^x$$

A	B	C	D	E	F
$x = \frac{2n}{6}$	$x = \frac{3}{2n}$	$x = 2n$	$x = \frac{3n}{2}$	$x = 4n$	$x = \frac{2}{6n}$