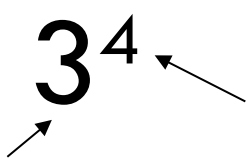
EXPONENTS

Repeated multiplication of the same number can be expressed as a _____



means 3x3x3x3

You can use your calculator to calculate large exponents

Examples

Write each expression as a power

3 x 3 x 3 x 3 = 4 x 4 = 5 x 5 x 5 = 6 x 6 x 6 x 6 x 6 =

Write each power in expanded form

5^2 = 3^5 = 2^4 =

Evaluate the following

6^3 $3^2 \times 2^3$ $6^2 + 3^2$

FINDING THE POWER OF A NEGATIVE NUMBER

There is a difference between -3^2 and $(-3)^2$.

So -3^2 = but $(-3)^2$ =

$-x^3$ = but $(-x)^3$ =

** The exponent affects ONLY the number/variable it touches. **

EXPONENTS WITHIN EXPRESSIONS – Remember to follow BEDMAS

Examples

$3^2 + 4^2$ = $4^2 - 2^2$ = $9^2 - 5^2 + 6^2$=

THE SQUARE ROOT – An operation which asks us to find the number that when multiplied by itself gives us the desired value

The square root of 25 is 5 because when five is multiplied by itself the result is 25.

Examples

$\sqrt{36} =$ $\sqrt{64} =$ $\sqrt{49} =$

The numbers above are called perfect squares because when we take the root of them we get an integer answer. Sometimes we need our calculator to help us determine the square root of numbers

$\sqrt{30} =$ $\sqrt{71} =$ $\sqrt{50} =$

PUTTING IT ALL TOGETHER

1. $\sqrt{49} + 3^2 =$
2. $5^2 - \sqrt{81} + 4^2 =$
3. $\sqrt{100} - 7^2 + 1^2 =$
4. $\sqrt{30 + 4} =$
5. $3^2 + \sqrt{77 + 4} - 6^2 =$
6. $2^2 - 4^2 =$
7. $3^2 - 4^2 + \sqrt{64} =$
8. $\sqrt{25} - 1^2 + 2^2 =$