



Calculating and Simplifying Exponential Expressions



The first thing we are going to do is enter in some numerical expressions and then we'll Calculate and Simplify them.

There are several things to keep in mind:

1) Parentheses will fix almost anything.

If you have trouble keeping the cursor where you want, then enter in some parentheses.

2) Use the left and right arrow keys to get in and out of parentheses.

3) When the arrows don't work use the mouse to click your way in and out of parentheses.

4) The tab key will move around expressions also.

5) The Calculate key looks like this :



6) The fraction button looks like this :



You can find it in the pop-up menu under this button :



You can also make a fraction by pressing the  key.

7) The Simplify button looks like this :



8) The Exponent button looks like this



You can also make an exponent by typing the  key.

9) The Root button looks like this



Here are some examples:

3^2

$\triangle 3^2 = 9$ Calculate

$(3+4)^2$

$\triangle (3+4)^2 = 49$ Calculate

$(3+4) \square 2$

$\triangle (3+4) \square 2 = 0.020408$ Calculate

$(3+4) \square \square 2$

$\triangle (3+4) \square \square 2 = \frac{1}{49}$ Simplify

$\frac{(3+4 \square 2)^2}{3 \square 2 + 5}$

$\triangle \frac{(3+4 \square 2)^2}{3 \square 2+5} = 4.1667$ Calculate

$\frac{(3+4 \square 2)^2}{3 \square 2+5}$

$\triangle \frac{(3+4 \square 2)^2}{3 \square 2+5} = \frac{25}{6}$ Simplify

$\left(\frac{3+4 \square 2}{3 \square 2+5}\right)^3$

$\triangle \left(\frac{3+4 \square 2}{3 \square 2+5}\right)^3 = 0.5787$ Calculate

$\left(\frac{3+4 \square 2}{3 \square 2+5}\right)^3$

$\triangle \left(\frac{3+4 \square 2}{3 \square 2+5}\right)^3 = \frac{125}{216}$ Simplify

$\sqrt{16}$

$\triangle \sqrt{16} = 4$ Calculate

$\sqrt{16 \square 7}$

$\triangle \sqrt{16 \square 7} = 3$ Calculate

$\frac{\sqrt{16 \square 7}}{3}$

$\triangle \frac{\sqrt{16 \square 7}}{3} = 1$ Calculate

$\frac{\sqrt{16 \square 7}}{2}$

$\triangle \frac{\sqrt{16 \square 7}}{2} = \frac{3}{2}$ Simplify



Now It's Your Turn... Follow the directions below to get hands on experience.



1.

Enter in these expressions and Calculate them:

1) $\sqrt{25}$

2) $\sqrt{(25 + 11)}$

3) 3^3

4) $(2 + 1)^3$



2.

Enter in these expressions. Calculate and Simplify them:

1) $\sqrt{(3 + 4)}$

2) $\sqrt{\frac{2 + 5}{2 * 4 + 3}}$

3) $\frac{(3 * 2 + 5)^2}{2}$