

Standard Index Form on a Calculator

The PowerPoint contains the slides shown below and these give an animated presentation explaining how to use an electronic calculator to evaluate problems involving standard index form. There are questions with answers.

Standard Index Form on a Calculator

Objective: Use an electronic calculator to evaluate problems involving standard index



1

In real life, most SIF problems would probably be done on a scientific calculator.

Here is how to do it on most calculators...



2

To put a number in standard index form into a calculator, we use the **Exp** button

First the 5 5×10^{11} Hence the buttons to press to put this SIF number into a calculator

5 Exp 11

Next press the Exp button. This will put $\times 10$ into the alculator

Finally put in the power by pressing 11



3

To do this calculation, we would...

Press these buttons... $5 \times 10^{11} + 2 \times 10^{12}$

5 Exp 11 + 2 Exp 12 =

Try it

The answer is... 2.5×10^{12}

Notice how your alculator displays this



4

An example of the buttons to press for the calculation:

$7 \times 10^{12} - 3 \times 10^{11}$

7 Exp 12 - 3 Exp 11 =

Try it. The answer is... 6.7×10^{12}

Notice how your alculator displays this



5

An example of the buttons to press for the calculation:

$2.5 \times 10^7 \times 6 \times 10^9$

2 . 5 Exp 7 × 6 Exp 9 =

Try it. The answer is... 1.5×10^{17}

Notice how your alculator displays this



6

An example of the buttons to press for the calculation:

$3 \times 10^{-8} \div 4 \times 10^6$

3 Exp (-) 8 ÷ 4 Exp 6 =

On some alulators this button is marked $\frac{\square}{\square}$

The answer is... 7.5×10^{-15}

Notice how your alculator display



7

Use a calculator to evaluate these

- $1.6 \times 10^{13} + 9 \times 10^{14} = 2.5 \times 10^{15}$
- $3 \times 10^{12} + 8.7 \times 10^{11} = 3.87 \times 10^{12}$
- $3 \times 10^{-8} - 6 \times 10^{-9} = 2.4 \times 10^{-8}$
- $4.7 \times 10^{11} - 3.3 \times 10^9 = 4.667 \times 10^{11}$
- $9 \times 10^8 \times 7 \times 10^6 = 6.3 \times 10^{15}$
- $9 \times 10^{-3} \div 1.2 \times 10^{-7} = 1.08 \times 10^{-4}$
- $1.2 \times 10^{-2} \div 3 \times 10^4 = 4 \times 10^{-7}$
- $5.6 \times 10^7 \div 8 \times 10^{-3} = 7 \times 10^{10}$



8