Scientific Notation on a Calculator

To enter a scientific notation number on a calculator,
Use a button that is labeled either "E," "EE," or "EXP."

On most calculators, this creates an "E," which stands for "x10^".
For example, 'E6' means 'x10^6'.

If you are using Google calculator, you can simply type the letter "e" on your computer.

Negative Exponents

Most calculators have two buttons that both look like a negative sign.
One of them is the button for "minus" and the other is the button for "negative."
When entering negative exponents, you *must* use the button for the negative sign, or you will get an error.

Importance of the "E" button

It is always better to use the scientific notation button than to manually enter "x10^" into your calculator.
Doing it manually often confuses your calculator, especially when you are dividing.

Exponents on a scientific notation number

When you need to square or cube a number in scientific notation, I think it is often better to place it in parentheses.

For example, to do 6 million cubed, I would type in:

(6E6)^3

Evaluate each statement using a calculator. Write the answer with three significant figures:

1.
$(4.56 \cdot 10^4)(6.59 \cdot 10^9)$

2.
$(8.34 \cdot 10^{19})(5.23 \cdot 10^{-8})$

3.
$(1.84 \cdot 10^{-14})(6.82 \cdot 10^{-7})$

4.
$(4.83 \cdot 10^{5})/(3.89 \cdot 10^{-19})$

5.
$(5.93 \cdot 10^{18})/(2.73 \cdot 10^{28})$

6.
$(7.12 \cdot 10^{-20})/(5.55 \cdot 10^{-4})$

7.
$(3.45 \cdot 10^{8})^{2}$

8.
$(1.87 \cdot 10^{-4})^{3}$

9.
$(8.34 \cdot 10^{9})^{-2}$

10.
$$\frac{(6.67 \cdot 10^{-11})(24.0)(5.97 \cdot 10^{24})}{(6.37 \cdot 10^{6})^{2}}$$

11.
$$\frac{(6.67 \cdot 10^{-11})(2.00 \cdot 10^{30})(5.97 \cdot 10^{24})}{(1.50 \cdot 10^{11})^{2}}$$

12.
$$\frac{(6.67 \cdot 10^{-11})(7.35 \cdot 10^{22})(5.97 \cdot 10^{24})}{(3.84 \cdot 10^{8})^{2}}$$

Answers:

1. 3.01e14 or $3.01 \cdot 10^{14}$

2. 4.36e12 or $4.36 \cdot 10^{12}$

3. 1.25e-20 or $1.25 \cdot 10^{-20}$

4. 1.24e24 or $1.24 \cdot 10^{24}$

5. 2.17e-10 or $2.17 \cdot 10^{-10}$

6. 1.28e-16 or $1.28 \cdot 10^{-16}$

7. 1.19e17 or $1.19 \cdot 10^{17}$

8. 6.54e-12 or $6.54 \cdot 10^{-12}$

9. 1.44e-20 or $1.44 \cdot 10^{-20}$

10. 236 or $2.36 \cdot 10^{2}$

11. 3.54e22 or $3.54 \cdot 10^{22}$

12. 1.98e20 or $1.98 \cdot 10^{20}$