

Example 5**Self Tutor**

Write in scientific notation:

a 9 448 800 000

b 0.000 000 053 04

$$\begin{aligned} \mathbf{a} \quad & 9\,448\,800\,000 \\ & = 9.4488 \times 1\,000\,000\,000 \\ \text{So, } a & = 9.4488 \text{ and } k = 9 \\ \text{The number is } & 9.4488 \times 10^9. \end{aligned}$$

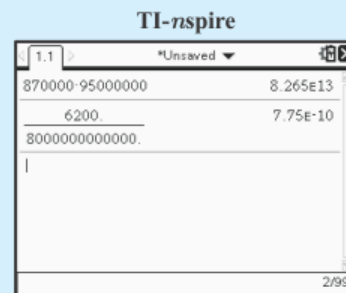
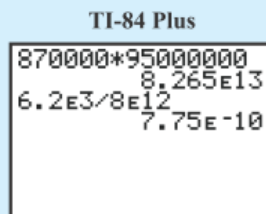
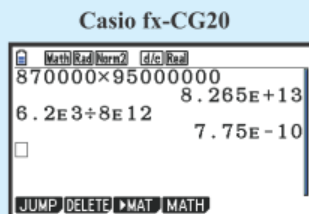
$$\begin{aligned} \mathbf{b} \quad & 0.000\,000\,053\,04 \\ & = 5.304 \div 100\,000\,000 \\ \text{So, } a & = 5.304 \text{ and } k = -8 \\ \text{The number is } & 5.304 \times 10^{-8}. \end{aligned}$$

Example 6**Self Tutor**

Use your calculator to evaluate:

a $870\,000 \times 95\,000\,000$

b $\frac{6.2 \times 10^3}{8 \times 10^{12}}$



a $870\,000 \times 95\,000\,000 = 8.265 \times 10^{13}$

b $\frac{6.2 \times 10^3}{8 \times 10^{12}} = 7.75 \times 10^{-10}$