

Answers to

Problems for practice:

I have intentionally set up the following problems so you could solve them without a calculator if you apply the rules above.

1. $(6.022 \times 10^{23}) \cdot (2.0 \times 10^6) = 1.2044 \times 10^{30} \rightarrow 1.2 \times 10^{30}$

2. $1.50 \times 10^{-7} \cdot (3.00 \times 10^{10}) = 4.50 \times 10^3$

3. $(7.5 \times 10^{-3}) \div (2.5 \times 10^6) = 3.0 \times 10^{-9}$

4. $(4.39 \times 10^{-6}) \div (1.0 \times 10^{-12}) = 4.39 \times 10^6 \rightarrow 4.4 \times 10^6$

5. $0.25^{-1} = 4.0$

6. $9^{1/2} = 3$

7. $(2.2 \times 10^5)^2 = 4.84 \times 10^{10} \rightarrow 4.8 \times 10^{10}$

8. $(1.00 \times 10^3)^5 = 1.00 \times 10^{15}$

9. $(25 \times 10^6)^{1/2} = 5.0 \times 10^3$

10. $(27 \times 10^{12})^{1/3} = 3.0 \times 10^4$