# Physics: *Scientific Notation*

*Part A: Express each of the following in standard form.*

1. $5.2 \times 10^3$

2. $9.65 \times 10^{-4}$

3. $8.5 \times 10^{-2}$

4. $2.71 \times 10^4$

5. $3.6 \times 10^1$

6. $6.452 \times 10^2$

7. $8.77 \times 10^{-1}$

8. $6.4 \times 10^{-3}$

*Part B: Express each of the following in scientific notation.*

1. 78,000

2. 0.00053

3. 250

4. 2,687

5. 16

6. 0.0043

7. 0.875

8. 0.012654

*Part C: Compute the following.*

1. $(6.02 \times 10^{23}) (8.65 \times 10^4)$

2. $(6.02 \times 10^{23}) (9.63 \times 10^{-2})$

3. $\dfrac{5.6 \times 10^{-18}}{8.9 \times 10^8}$

4. $(-4.12 \times 10^{-4}) (7.33 \times 10^{12})$

5. $\dfrac{1.0 \times 10^{-14}}{4.2 \times 10^{-6}}$

6. $\dfrac{7.85 \times 10^{26}}{6.02 \times 10^{23}}$

7. $(-3.2 \times 10^{-7}) (-8.6 \times 10^{-9})$

8. $\dfrac{(5.4 \times 10^4) (2.2 \times 10^7)}{4.5 \times 10^5}$

9. $\dfrac{(6.02 \times 10^{23}) (-1.42 \times 10^{-15})}{6.54 \times 10^{-6}}$

10. $\dfrac{(6.02 \times 10^{23}) (-5.11 \times 10^{-27})}{-8.23 \times 10^5}$

11. $\dfrac{(3.1 \times 10^{14}) (4.4 \times 10^{-12})}{-6.6 \times 10^{-14}}$

12. $\dfrac{(8.2 \times 10^{-3}) (-7.9 \times 10^7)}{7.3 \times 10^{-16}}$

13. $\dfrac{(-1.6 \times 10^5) (-2.4 \times 10^{15})}{8.9 \times 10^3}$

14. $(7.0 \times 10^{28}) (-3.2 \times 10^{-20}) (-6.4 \times 10^{35})$