Answer Key · Lesson 7.3: Scientific Notation

School Launch · Algebra I · Unit 7 · Worksheet A · for the parent

Key

1. 6.5×10^{-6}

Write 0.0000065 in scientific notation.

2. 1.7×10^{5}

Write $170{,}000$ in scientific notation.

3. 2.8×10^{4}

Write $28{,}000$ in scientific notation.

4. $\approx 3.22 \times 10^{13}$

1. $2.3 \times 1.4 = 3.22$; exponents $8 + 5 = 13$
2. Normalize: $3.22 \times 10^{13} \to 3.22 \times 10^{13}$

Compute and write in scientific notation (round to 3 significant digits): $(2.3 \times 10^{8}) \times (1.4 \times 10^{5})$.

5. $\approx 6.84 \times 10^{6}$

1. $3.6 \times 1.9 = 6.84$; exponents $5 + 1 = 6$
2. Normalize: $6.84 \times 10^{6} \to 6.84 \times 10^{6}$

Compute and write in scientific notation (round to 3 significant digits): $(3.6 \times 10^{5}) \times (1.9 \times 10^{1})$.

6. $\approx 2.85 \times 10^{2}$

1. $1.9 \times 1.5 = 2.85$; exponents $6 + (-4) = 2$
2. Normalize: $2.85 \times 10^{2} \to 2.85 \times 10^{2}$

Compute and write in scientific notation (round to 3 significant digits): $(1.9 \times 10^{6}) \times (1.5 \times 10^{-4})$.

7. $\approx 5.95 \times 10^{-2}$

1. $1.7 \times 3.5 = 5.95$; exponents $3 + (-5) = -2$
2. Normalize: $5.95 \times 10^{-2} \to 5.95 \times 10^{-2}$

Compute and write in scientific notation (round to 3 significant digits): $(1.7 \times 10^{3}) \times (3.5 \times 10^{-5})$.

8. $\approx 3.54 \times 10^{6}$

1. $4.6 \div 1.3 = 3.5385$; exponents $4 - (-2) = 6$
2. Normalize: $3.5385 \times 10^{6} \to 3.54 \times 10^{6}$

Compute and write in scientific notation (round to 3 significant digits): $(4.6 \times 10^{4}) \div (1.3 \times 10^{-2})$.

9. $\approx 3.33 \times 10^{2}$

1. $1.6 \div 4.8 = 0.3333$; exponents $2 - (-1) = 3$
2. Normalize: $0.3333 \times 10^{3} \to 3.33 \times 10^{2}$

Compute and write in scientific notation (round to 3 significant digits): $(1.6 \times 10^{2}) \div (4.8 \times 10^{-1})$.

10. $\approx 5.56 \times 10^{4}$

1. $1.5 \div 2.7 = 0.5556$; exponents $3 - (-2) = 5$
2. Normalize: $0.5556 \times 10^{5} \to 5.56 \times 10^{4}$

Compute and write in scientific notation (round to 3 significant digits): $(1.5 \times 10^{3}) \div (2.7 \times 10^{-2})$.