

Name : _____

Score : _____

Scientific Notation

Example: 1Write 4.32215×10^5 in standard notation.

Here the exponent is 5. We should move the decimal point 5 places to the right.

$$4.32215 \times 10^5 = 432,215$$

Example: 2Write 3.7×10^{-6} in standard notation.

Here the exponent is -6. We should move the decimal point 6 places to the left.

$$3.7 \times 10^{-6} = 0.000037$$

Express each number in standard notation.

1) $4.62 \times 10^8 =$ _____

2) $1.2561 \times 10^{-5} =$ _____

3) $9.082 \times 10^{11} =$ _____

4) $5.4 \times 10^{-7} =$ _____

5) $3.5624 \times 10^{13} =$ _____

6) $7.5005 \times 10^{-12} =$ _____

7) $1.28 \times 10^8 =$ _____

8) $2.119 \times 10^{-10} =$ _____

9) $8.0025 \times 10^6 =$ _____

10) $3.1 \times 10^{-9} =$ _____

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Scientific Notation

Example: 1Write 3.25×10^2 in standard notation.

Here the exponent is 2. We should move the decimal point 2 places to the right.

$$\begin{array}{c}
 3 \quad \overbrace{2} \quad \overbrace{5} \\
 \downarrow \quad \downarrow \\
 3.25 \times 10^2 = \mathbf{325}
 \end{array}$$

Example: 2Write 8.76×10^{-2} in standard notation.

Here the exponent is -2. We should move the decimal point 2 places to the left.

$$\begin{array}{c}
 0 \quad \overbrace{0} \quad \overbrace{8} \quad 7 \quad 6 \\
 \downarrow \quad \downarrow \\
 8.76 \times 10^{-2} = \mathbf{0.0876}
 \end{array}$$

Express each number in standard notation.

1) $9.63 \times 10^{-3} =$ _____

2) $5.1146 \times 10^3 =$ _____

3) $3.042 \times 10^2 =$ _____

4) $7.259 \times 10^4 =$ _____

5) $9.105 \times 10^{-2} =$ _____

6) $6.5 \times 10^{-5} =$ _____

7) $6.1 \times 10^4 =$ _____

8) $9.8 \times 10^{-1} =$ _____

9) $2.9854 \times 10^{-1} =$ _____

10) $8.432 \times 10^4 =$ _____

11) $1.05 \times 10^2 =$ _____

12) $2.8502 \times 10^{-3} =$ _____

13) $4.172 \times 10^{-4} =$ _____

14) $9.7 \times 10^5 =$ _____