

**Scientific Notation**

Mixed: ES1

Example: 1

Write 6, 224 in scientific notation.



We should move the decimal point 3 places to the left. So, the exponent will be 3.

$$6, 224 = 6.224 \times 10^3$$

Example: 2

Write 0.0087 in scientific notation.



We should move the decimal point 3 places to the right. So, the exponent will be -3.

$$0.0087 = 8.7 \times 10^{-3}$$

Express each number in scientific notation.

1) 0.0259 = \_\_\_\_\_

2) 902 = \_\_\_\_\_

3) 5, 5820 = \_\_\_\_\_

4) 0.315 = \_\_\_\_\_

5) 0.00973 = \_\_\_\_\_

6) 1, 0006 = \_\_\_\_\_

7) 856 = \_\_\_\_\_

8) 0.2058 = \_\_\_\_\_

9) 0.00072 = \_\_\_\_\_

10) 5, 008 = \_\_\_\_\_

11) 0.001216 = \_\_\_\_\_

12) 0.00145 = \_\_\_\_\_

13) 7, 5919 = \_\_\_\_\_

14) 0.12 = \_\_\_\_\_

## Scientific Notation - Standard

Mixed: ES1

Example: 1Write  $3.25 \times 10^2$  in standard notation.

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

$$\begin{array}{c}
 3.25 \\
 \curvearrowright \quad \curvearrowright \\
 325
 \end{array}$$

$3.25 \times 10^2 = \mathbf{325}$

Example: 2Write  $8.76 \times 10^{-2}$  in standard notation.

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

$$\begin{array}{c}
 008.76 \\
 \curvearrowleft \quad \curvearrowleft \\
 0.0876
 \end{array}$$

$8.76 \times 10^{-2} = \mathbf{0.0876}$

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)  $9.7 \times 10^5 =$  \_\_\_\_\_