

Name : _____

Score : _____

Scientific Notation

Example: 1

Write 514, 223 in scientific notation.

5 1 4 2 2 3

We should move the decimal point 5 places to the left. So, the exponent will be 5.

$$514, 223 = 5.14223 \times 10^5$$

Example: 2

Write 0.0000083 in scientific notation.

0.0 0 0 0 0 8 3

We should move the decimal point 6 places to the right. So, the exponent will be -6.

$$0.0000083 = 8.3 \times 10^{-6}$$

Express each number in scientific notation.

1) 18, 451, 000 = _____

2) 0.000004826 = _____

3) 5, 820, 000, 000, 000 = _____

4) 0.000000007269 = _____

5) 350, 100, 000, 000, 000 = _____

6) 0.00000000000014 = _____

7) 71, 300, 000 = _____

8) 0.00000002164 = _____

9) 30, 000, 000, 000, 000 = _____

10) 0.0000642 = _____

Answer key

Example: 1

Write 514, 223 in scientific notation.

5 1 4 2 2 3

We should move the decimal point 5 places to the left. So, the exponent will be 5.

$$514, 223 = 5.14223 \times 10^5$$

Example: 2

Write 0.0000083 in scientific notation.

0.0 0 0 0 0 8 3

We should move the decimal point 6 places to the right. So, the exponent will be -6.

$$0.0000083 = 8.3 \times 10^{-6}$$

Express each number in scientific notation.

1) 18, 451, 000 = 1.8451 × 10⁷

2) 0.000004826 = 4.826 × 10⁻⁶

3) 5, 820, 000, 000, 000 = 5.82 × 10¹²

4) 0.000000007269 = 7.269 × 10⁻⁹

5) 350, 100, 000, 000, 000 = 3.501 × 10¹⁴

6) 0.00000000000014 = 1.4 × 10⁻¹³

7) 71, 300, 000 = 7.13 × 10⁷

8) 0.00000002164 = 2.164 × 10⁻⁸

9) 30, 000, 000, 000, 000 = 3 × 10¹³

10) 0.0000642 = 6.42 × 10⁻⁵