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Scientific Notation Notes

When the decimal point is invisible in a number, where is it?

Scientific Notation: a kind of _____ that can be used to write numbers.

Rules for Scientific Notation:

1) The first number has to be between _____ and _____.
2) You use an "____" for times.
3) The second number is always _____ raised to a _____.

Positive Exponent vs. Negative Exponent

Positive Exponents: Moves the decimal to the _____.

Negative Exponents: Moves the decimal to the _____.

Examples:

9.26×10^{5} 9.26×10^{-5}

Write the numbers in scientific notation.

1) 9,580,000
2) 2,351
3) 2,000,001
4) 4,001

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5) 45.2

6) 4,100

7) 3

8) 5,000,000

9) 0.45

10) 0.9

11) 0.00032

12) 0.0013409

Write the numbers in standard form.

13) 3.7×10^{9}

14) 9.13×10^{7}

15) 6.282×10^{8}

16) 4×10^{3}

17) 3×10^{-4}

18) 1.262×10^{9}

19) 1.2×10^{-5}

20) 7×10^{2}

21) 5×10^{1}

22) 9.12345×10^{2}

23) 7.53×10^{0}

24) 7.8343×10^{-4}

25) In 2005 the population of Mexico was 1.06×10^{8} and the population of Brazil was 1.86×10^{8}. In which country do more people live?

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Scientific Notation Worksheet

Write the numbers in scientific notation.

1) 428,000

2) 1,610,000

3) 3,000,000,000

4) 60,0102

5) 4

6) 521

7) 6,005

8) 8,900,089

9) 2,000

10) 0.9

11) 0.2342

12) 0.004234

13) 0.000004

14) 0.5435

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Write the numbers in standard form.

15) 2.1×10^3

16) 8×10^4

17) 2.5673×10^5

18) 4×10^5

19) 2.115×10^2

20) 7.003×10^3

21) 5.5×10^6

22) 1×10^4

23) 2.354×10^{-2}

24) 1.4546×10^{-3}

25) 7.8×10^0

26) 3.00032×10^{-6}

27) 5.209×10^{-4}

28) 9.0081×10^{-6}

29) Neptune's diameter is 4.9528×10^7 meters. Mars's diameter is 6.7868×10^6 meters. Which planet has the larger diameter?