

L8 Scientific Notation

Warm up: Perform the following operations

1) $14 \div 10 =$ 4) $127 \times 10 =$

2) $482 \div 1000 =$ 5) $48023 \times 10^4 =$

3) $662 \div 10^2 =$

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L8 Scientific Notation

When numbers get really Big or really small it is inconvenient to write out all of the zeros.

For this reason we use Scientific Notation.

A positive number in scientific notation is in the form:
 $a \times 10^n$ where $1 \leq a < 10$; and n is an integer.

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Ex 1: Express in scientific notation **$a \times 10^n$** $1 \leq a < 10$
POSITIVE EXPONENT **NEGATIVE EXPONENT**
a) 5600 b) 0.00042

3

Ex 2: Write the following numbers in scientific notation:

1) 360 = 6) 1226000 =

2) 0.4 = 7) 0.025 =

3) 7523 = 8) 0.000045 =

4) 45000 = 9) 81 =

5) 235 =

4

Examples 3:

$42\,000\,000\,000\,000 \times 72\,000\,000\,000$

5

Examples 4:

$125\,000\,000\,000 \div 0.000\,000\,000\,25$

6

Examples 5:

$42\,000\,000\,000 \times 0.000\,000\,000\,21$

7

Examples 6:

$42\,000\,000\,000 \div 0.000\,000\,000\,126$

8

Practice:
1.8 # 1,2
1.9 # 1-5



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