

scientific notation Notes

Thursday, November 12, 2015 12:29 PM



scientific notation Notes

Math 9 Chapter Scientific Notation

Notes

Name _____

Blk _____

What is scientific notation? Large numbers can be awkward and hard to read. So we express very large (and very small) numbers in scientific notation (using base 10)

Ex 1

Express in scientific notation

a) 120 000 000 000, place a decimal after the 1st non-zero digit. (1.20 000 000 000)
11 jumps.

2.) drop the trailing zeros. $\rightarrow 1.2$

3.) count the # of jumps (# of decimal places moved)

4.) multiply 1.2 by 10^n jumps $n=11$

so 1.2×10^{11}

b) 360 000

$3.6 \times 10^5 \Rightarrow 3.6 \times 100,000$

c) 2200

2.2×10^3

d) 525

5.25×10^2

Remember Scientific Notation is just another way to write the same number!

How is it different that writing numbers in a power of 10?

In powers of ten, you multiply every place value.

Ex 2

Put 0.0000088 into scientific notation

6 jumps
right.
 8.8×10^{-6}

$\rightarrow$ go in reverse, use a negative exponent.

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Put into scientific notation

a) 0.00956

$$9.56 \times 10^{-3}$$

b) 0.000014

$$1.4 \times 10^{-5}$$

How do you put numbers in scientific notation back into standard form?

- If the exponent is positive, you have a large number, so move your decimal right.
- If the exponent is negative, you have a small #, so move your decimal left.

Ex 3

Put back into standard form

a) 2.65×10^{-3}

small #
jump left.

$$2.65 \times 10^{-3} = 0.00265$$

b) 7×10^6

7 million
7,000,000

c) 8.3×10^{-5}

$$0.000083$$

Assignment scientific notation worksheet

puzzle (p.68)

> Due Monday

* short.
Quiz Monday 2.1-2.2 + sci. notation*

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