Book and homework on your desk.

You will have 10 minutes to read HF.

Great examples:

In this chapter we are first introduced to Dorothy Vaughan. What are three adjectives you would use to describe her? Use text to support your choices.
Intelligent, she is a teacher and works at a high school. Hard working with this job she has to not just teach the students but keep up the building make lunches and take care of her family at home. Caring she takes a extra job with a salary of 40 cents per hour in the heat of summer to make extra money for her children and family.

Read the back cover of the book. Based on the back cover, what is the setting of the book? Who are the main characters? What obstacles might the characters face?
Dorothy Vaughan, Mary Jackson and Katherine Johnson are the main characters. The setting of the book is during the Cold War right after WWII. The characters will face the challenge of segregation, because of the time period of America, and Jim Crow Laws.


10 MINUTES

Announcements

HF through Chapter 6 must be completed by Monday

Test Wednesday, 2/20

Bring Cans!

Unit Map

~~Thursday, 2/7/2019 → Transformations of functions~~
~~Friday, 2/8/2019 → Ms. Barger Absent, Hidden Figures reading and work~~
~~Monday, 2/11/2019 → Exponential Growth and Decay~~
~~Tuesday, 2/12/2019 → Compound Interest and Half Life~~
~~Wednesday, 2/13/2019 → Transformations of Exponentials~~
~~Thursday, 2/14/2019 → Scientific Notation converting back and forth~~
Friday, 2/15/2019 → Scientific Notation adding and subtracting & multiplying and dividing
Monday, 2/18/2019 → Scientific Notation word problems
Tuesday, 2/19/2019 → Review
Wednesday, 2/20/2019 → **Exponents Test 2**

Quizlet

https://quizlet.com/_642L9y

Scientific Notation (Day 2 of 3)

2/15/2019

Warm-Up

Simplify each expression.

66. $\left(\frac{r^{-7}b^{-8}}{t^{-4}w^{1}}\right)^{0}$

67. $(-5)^{2} - (0.5)^{-2}$

68. $\frac{6}{m^{2}} + \frac{5m^{-2}}{3^{-3}}$

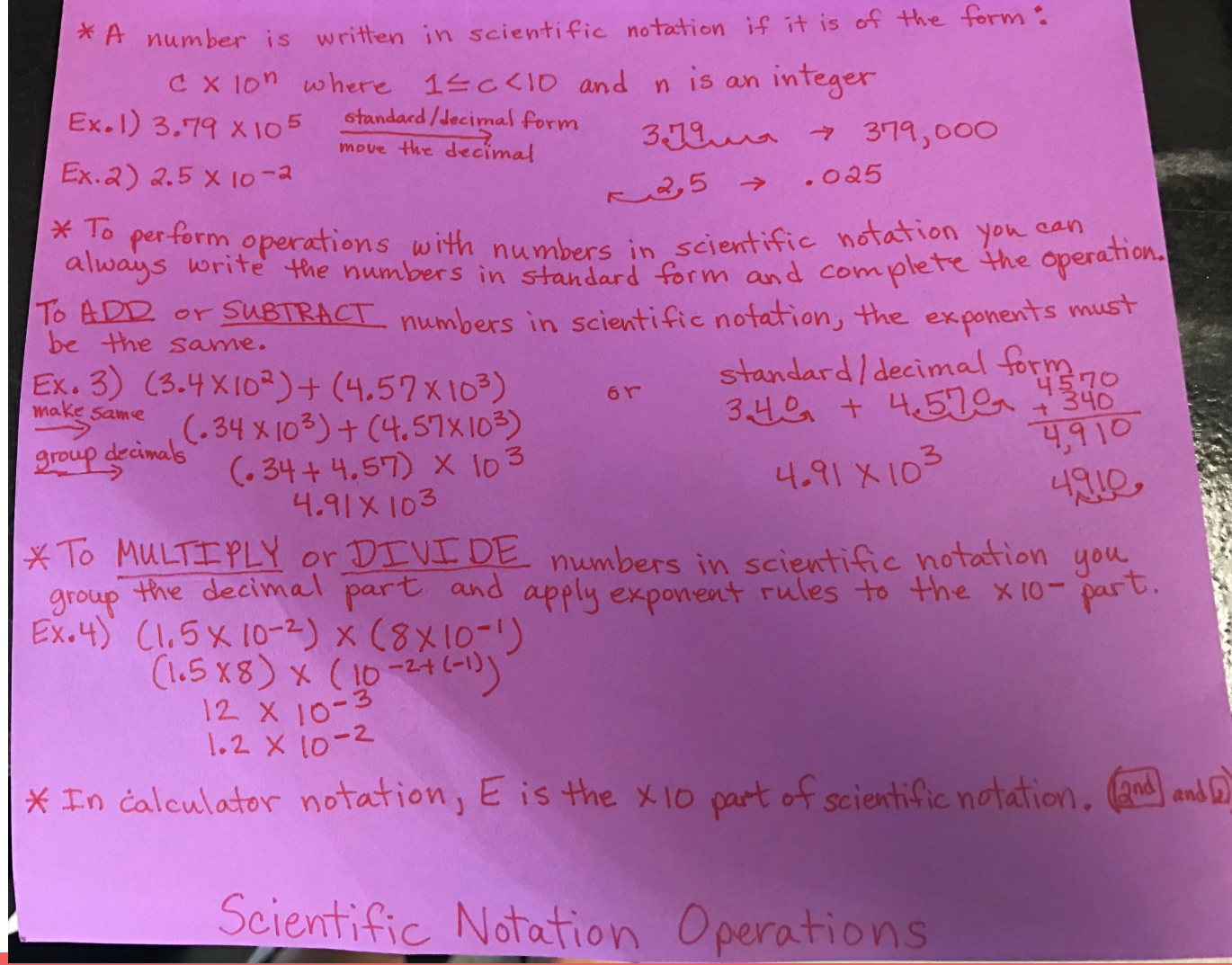
69. $2^{3}(5^{0} - 6m^{2})$

70. $\frac{2x^{-5}y^{3}}{n^{2}} \div \frac{r^{2}y^{5}}{2n}$

71. $2^{-1} - \frac{1}{3^{-2}} + 5\left(\frac{1}{2^{2}}\right)$

Scientific Notation Operations

Foldable!


* A number is written in scientific notation if it is of the form:
$c \times 10^n$ where $1 \leq c < 10$ and n is an integer
Ex. 1) 3.79×10^5 standard/decimal form move the decimal
3.79 → 379,000
Ex. 2) 2.5×10^{-2}
2.5 → .025
* To perform operations with numbers in scientific notation you can always write the numbers in standard form and complete the operation.
To ADD or SUBTRACT numbers in scientific notation, the exponents must be the same.
Ex. 3) $(3.4 \times 10^2) + (4.57 \times 10^3)$
make same
$(.34 \times 10^3) + (4.57 \times 10^3)$
group decimals
$(.34 + 4.57) \times 10^3$
4.91×10^3
or
standard/decimal form
3.40 + 4.570
4570
+ 340
4,910
4.91×10^3
4910
* To MULTIPLY or DIVIDE numbers in scientific notation you group the decimal part and apply exponent rules to the $\times 10^-$ part.
Ex. 4) $(1.5 \times 10^{-2}) \times (8 \times 10^{-1})$
$(1.5 \times 8) \times (10^{-2+(-1)})$
12×10^{-3}
1.2×10^{-2}
* In calculator notation, E is the $\times 10$ part of scientific notation. 2nd and ,
Scientific Notation Operations

Practice Adding and Subtracting Scientific Notation

Addition and Subtraction

Before numbers in scientific notation can be added or subtracted, the exponents must be equal.

Not equal — Equal

$$(3.4 \times 10^2) + (4.57 \times 10^3) = (0.34 \times 10^3) + (4.57 \times 10^3)$$

The decimal is moved to the left to increase the exponent.

$$= (0.34 + 4.57) \times 10^3$$

$$= 4.91 \times 10^3$$

Practice Adding and Subtracting Scientific Notation

$(7.4 \times 10^{2}) + (2.735 \times 10^{6})$

$(5.2 \times 10^{7}) + (3.01 \times 10^{6})$

$(2 \times 10^{3}) - (1.9 \times 10^{2})$

Practice Adding and Subtracting Scientific Notation

$(2.005 \times 10^{5}) - (8.664 \times 10^{4})$

$(6.2 \times 10^{5}) + (9.7 \times 10^{6})$

Practice Multiplying and Dividing Scientific Notation

Multiplication

When numbers in scientific notation are multiplied, only the number is multiplied. The exponents are added.

$$(2.00 \times 10^3)(4.00 \times 10^4) = (2.00)(4.00) \times 10^{3+4}$$

$$= 8.00 \times 10^7$$

Practice Multiplying and Dividing Scientific Notation

Division

When numbers in scientific notation are divided, only the number is divided. The exponents are subtracted.

$$\frac{9.60 \times 10^{7}}{1.60 \times 10^{4}} = \frac{9.60}{1.60} \times 10^{7-4}$$

$$= 6.00 \times 10^{3}$$

Practice Multiplying and Dividing Scientific Notation

$(6.0 \times 10^{3}) \times (1.5 \times 10^{-2})$

$(1.5 \times 10^{-2}) \times (8.0 \times 10^{-1})$

$$\frac{7.8 \times 10^{3}}{1.2 \times 10^{4}}$$

$$\frac{8.1 \times 10^{-2}}{9.0 \times 10^{2}}$$

Classwork

1) Visit http://bit.ly/2GqR2cJ
2) Click “Go”
    a) “Practice: Conversion” then “Quiz: Conversion”
    b) “Practice: Multiply/Divide” then “Quiz: Multiply/Divide”
    c) “Practice: Add/Subtract” then Quiz: Add/Subtract”

Homework

3 worksheets posted online

- Multiplying and Dividing Scientific Notation Worksheet
- Adding and Subtracting Scientific Notation Worksheet
- Mixed Operations Scientific Notation Worksheet

Hidden Figures Through Chapter 6 Due Monday

Test Corrections Due Thursday