

Operations with Scientific Notation Foldable

Multiplying with Scientific Notation	Dividing with Scientific Notation
Adding with Scientific Notation	Subtracting with Scientific Notation

Division with Scientific Notation	Multiplication with Scientific Notation
Addition with Scientific Notation	Subtraction with Scientific Notation

Thank you for purchasing this product. It includes 2 different foldable for operations with scientific notation. You can decide which foldable works better in your class, and include different examples or modify the steps.

Page 3 and 4 show the notes I use in my classroom (same notes can be written in the square foldable).

Page 5 and 6 provide the steps and students write down the examples. In my classroom students use colored pens or highlighters. It helps them organize the information and remember the steps.

Page 7 and 8 is a blank copy.

Page 9 and 10 is the square foldable.

Printing instructions: Select the foldable you want to use in your class. Print it front to back **or** print it and copy it front to back.

Multiplying with Scientific Notation

1. Multiply the decimal numbers.
2. Add exponents.
3. Make sure you have one digit (non zero) in front of the decimal.*

Example:
 $(3.7 \times 10^6) \times (6.2 \times 10^4)$

Step 1: $3.7 \times 6.2 = 22.94$

Step 2: $6 + 4 = 10$

Step 3: $22.94 \times 10^{10+1}$
 2.294×10^{11}

Example:
 $(1.2 \times 10^8) \div (2.4 \times 10^3)$

Step 1: $1.2 \div 2.4 = 0.5$

Step 2: $8 - 3 = 5$

Step 3: $0.5 \times 10^{5-1}$
 5×10^4

Dividing with Scientific Notation

1. Divide the decimal numbers.
2. Subtract exponents.
3. Make sure you have one digit (non zero) in front of the decimal.*

* To change the exponent count how many times you need to move the decimal, if you move decimal **forward add** that number to the exponents, if you move the decimal **back subtract** that number from the exponent.

Adding with Scientific Notation

1. Make sure that exponents of both numbers are the same.*
2. Add decimals, don't forget to line up the decimal points. Keep exponents the same.
3. Make sure you have one digit (non zero) in front of the decimal.*

Example:
 $(9.7 \times 10^6) + (5.4 \times 10^4)$

Step 1:
 $9.7 \times 10^{6-2} = 970.0 \times 10^4$
 Change 6 to 4 by moving decimal **back 2** places.

Step 2:

$$\begin{array}{r} 970.0 \times 10^4 \\ + 5.4 \times 10^4 \\ \hline 975.4 \times 10^4 \end{array}$$

Step 3: $975.4 \times 10^{4+2}$
 9.754×10^6

Example:
 $(1.7 \times 10^8) - (7.2 \times 10^7)$

Step 1:
 $1.7 \times 10^{8-1} = 17.0 \times 10^7$
 Change 8 to 7 by moving decimal **back 1** place.

Step 2:

$$\begin{array}{r} 17.0 \times 10^7 \\ - 7.2 \times 10^7 \\ \hline 9.8 \times 10^7 \end{array}$$

Step 3: only one digit in front of the decimal.
 9.8×10^7

Subtracting with Scientific Notation

1. Make sure that exponents of both numbers are the same.*
2. Subtract decimals, don't forget to line up the decimal points. Keep exponents the same.
3. Make sure you have one digit (non zero) in front of the decimal.*

**Adding
with
Scientific Notation**

**Multiplying
with
Scientific Notation**

Fold here

**Subtracting
with
Scientific Notation**

**Dividing
with
Scientific Notation**

Fold here

Multiplying with Scientific Notation

1. Multiply the decimal numbers.
2. Add exponents.
3. Make sure you have one digit (non zero) in front of the decimal.*

Dividing with Scientific Notation

1. Divide the decimal numbers.
2. Subtract exponents.
3. Make sure you have one digit (non zero) in front of the decimal.*

* To change the exponent count how many times you need to move the decimal, if you move decimal **forward add** that number to the exponents, if you move the decimal **back subtract** that number from the exponent.

Adding with Scientific Notation

1. Make sure that exponents of both numbers are the same.*
2. Add decimals, don't forget to line up the decimal points. Keep exponents the same.
3. Make sure you have one digit (non zero) in front of the decimal.*

Subtracting with Scientific Notation

1. Make sure that exponents of both numbers are the same.*
2. Subtract decimals, don't forget to line up the decimal points. Keep exponents the same.
3. Make sure you have one digit (non zero) in front of the decimal.*

**Adding
with
Scientific Notation**

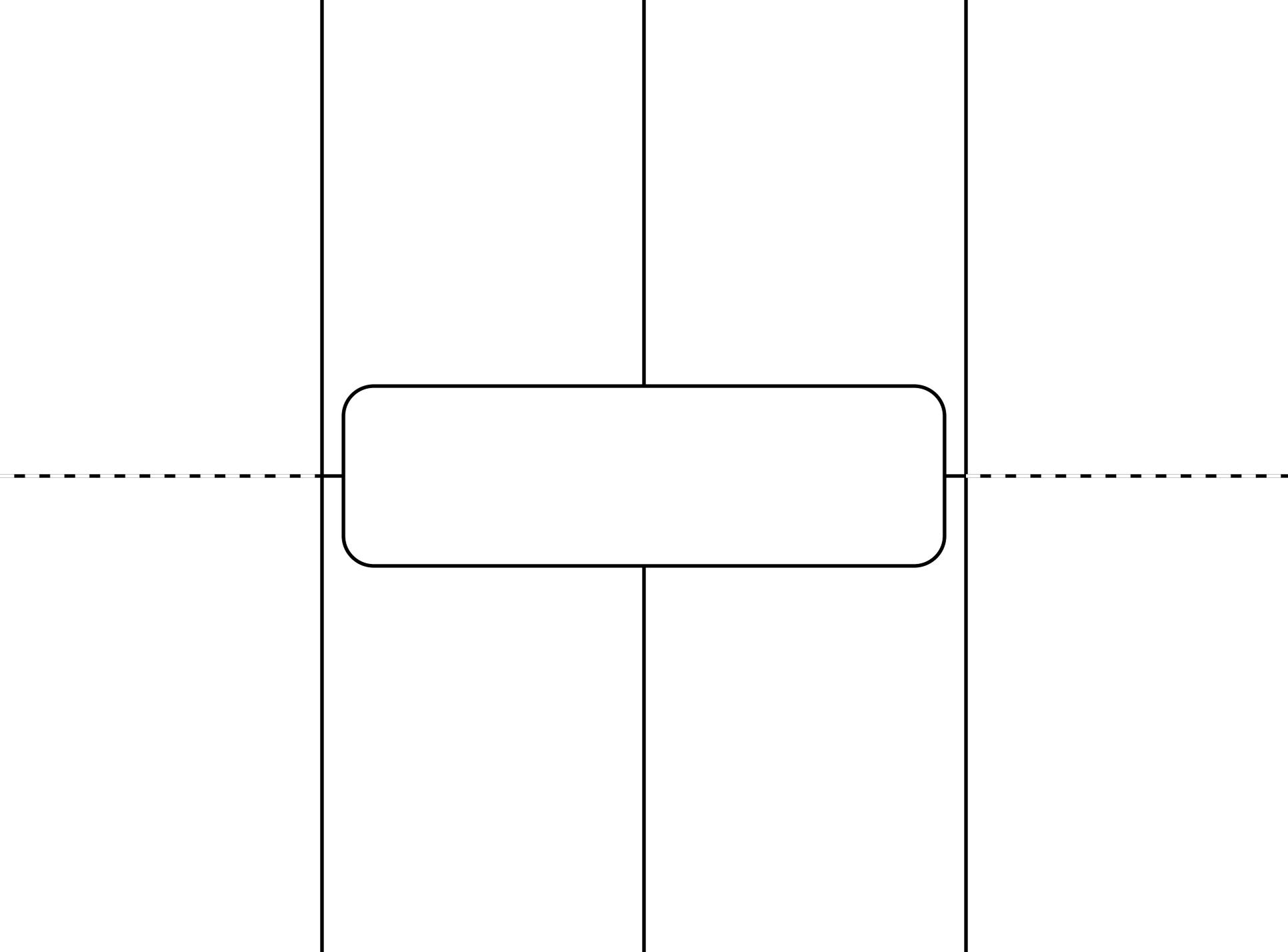
**Multiplying
with
Scientific Notation**

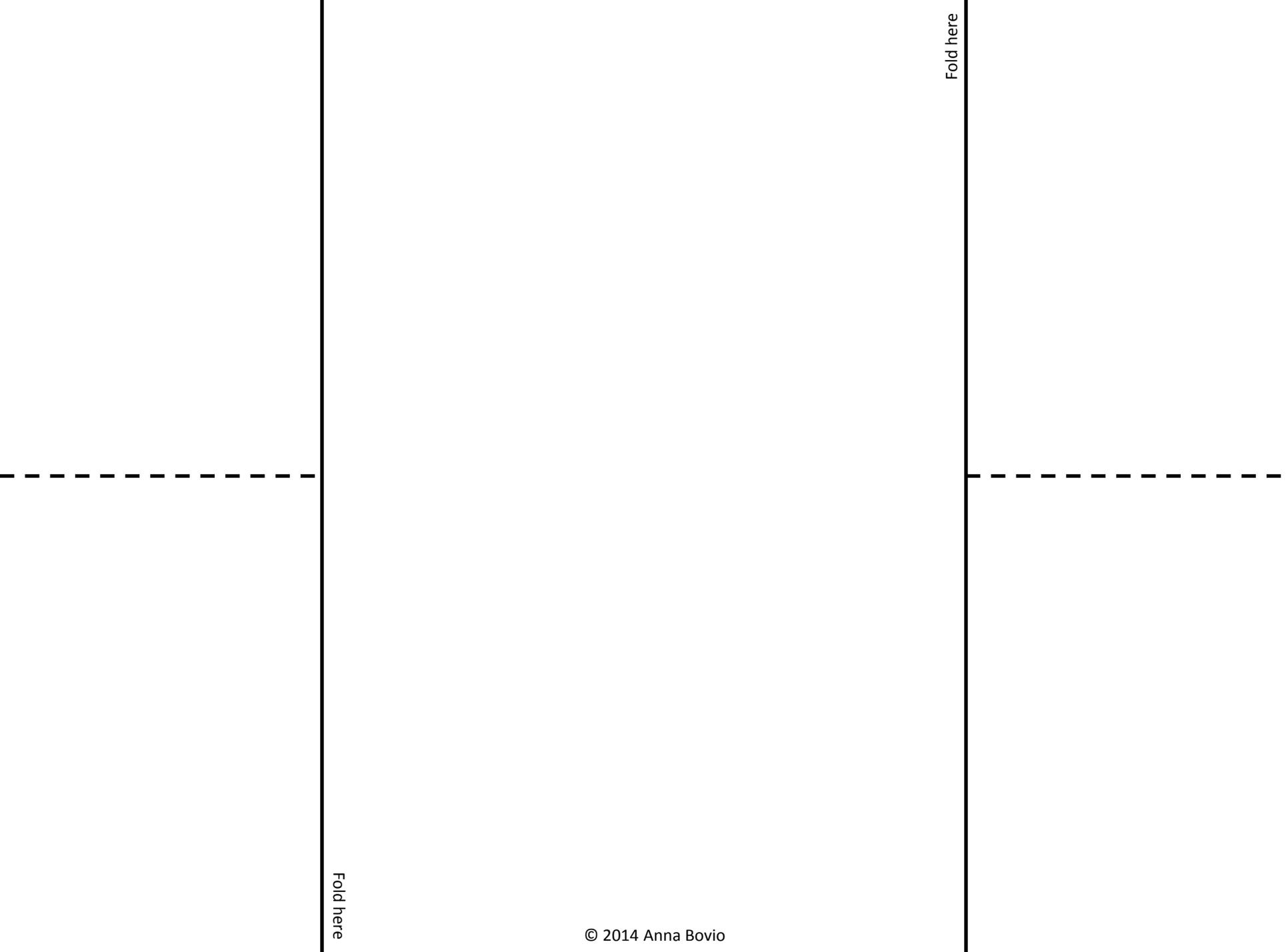
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**Subtracting
with
Scientific Notation**

**Dividing
with
Scientific Notation**

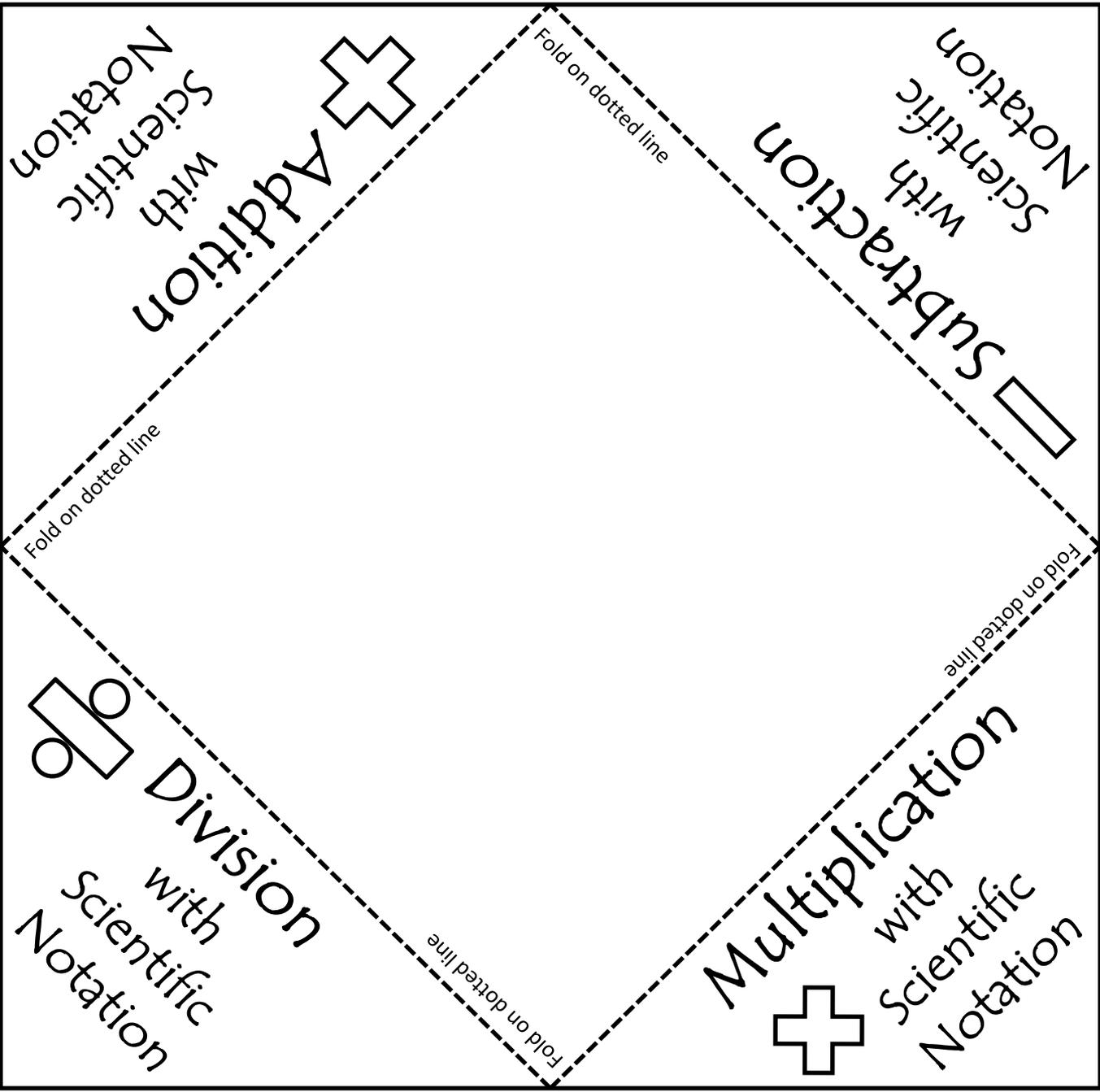
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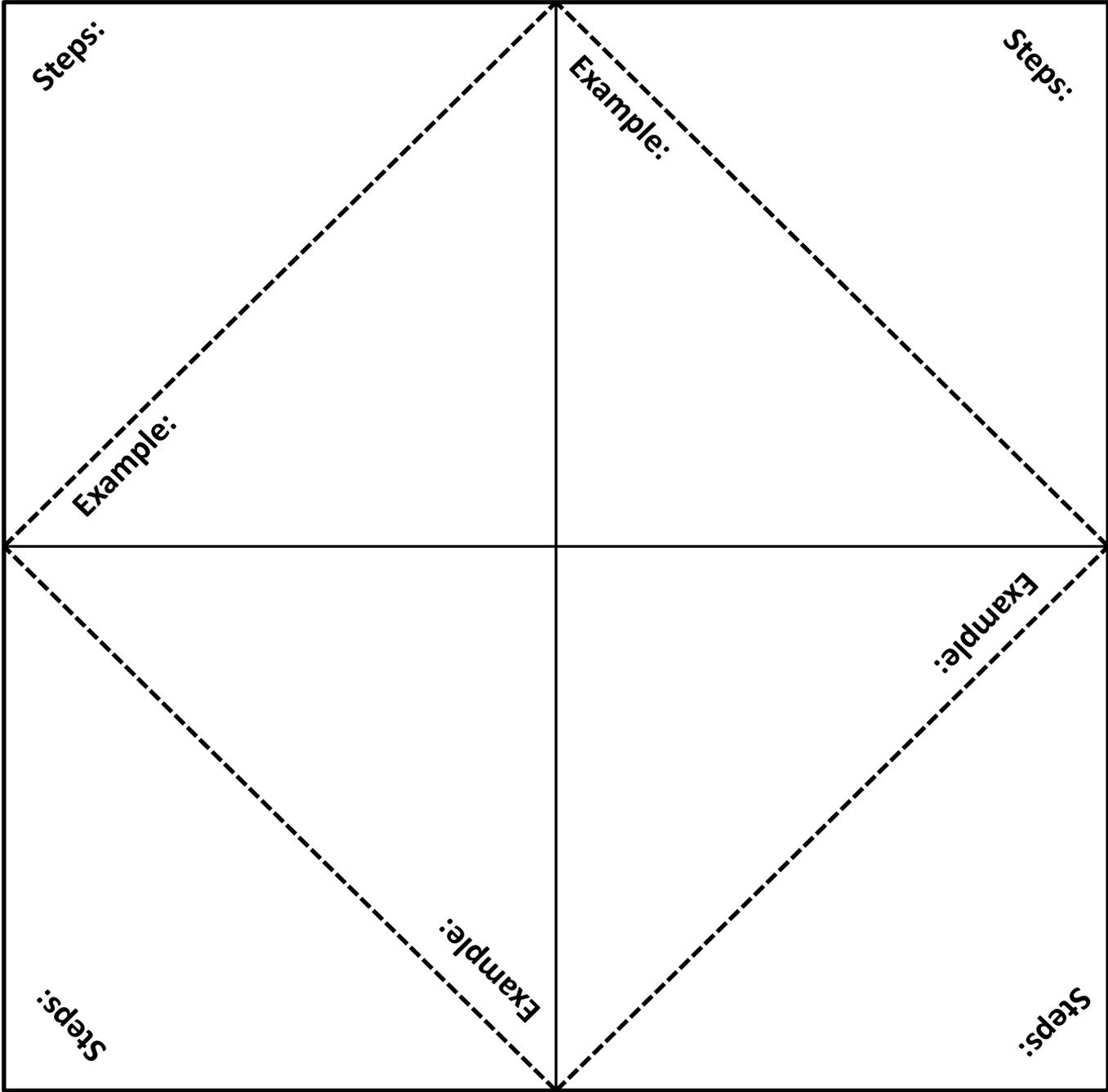




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