

Name _____ Date _____

Flow Chart

Write your topic at the top. List steps or events in time order.

Topic:



Name _____ Date _____

KWL Chart

Before you begin your research, list details in the first two columns. Fill in the last column after completing your research.

Topic _____		
What I Know	What I Want to Know	What I Learned

Name _____ Date _____

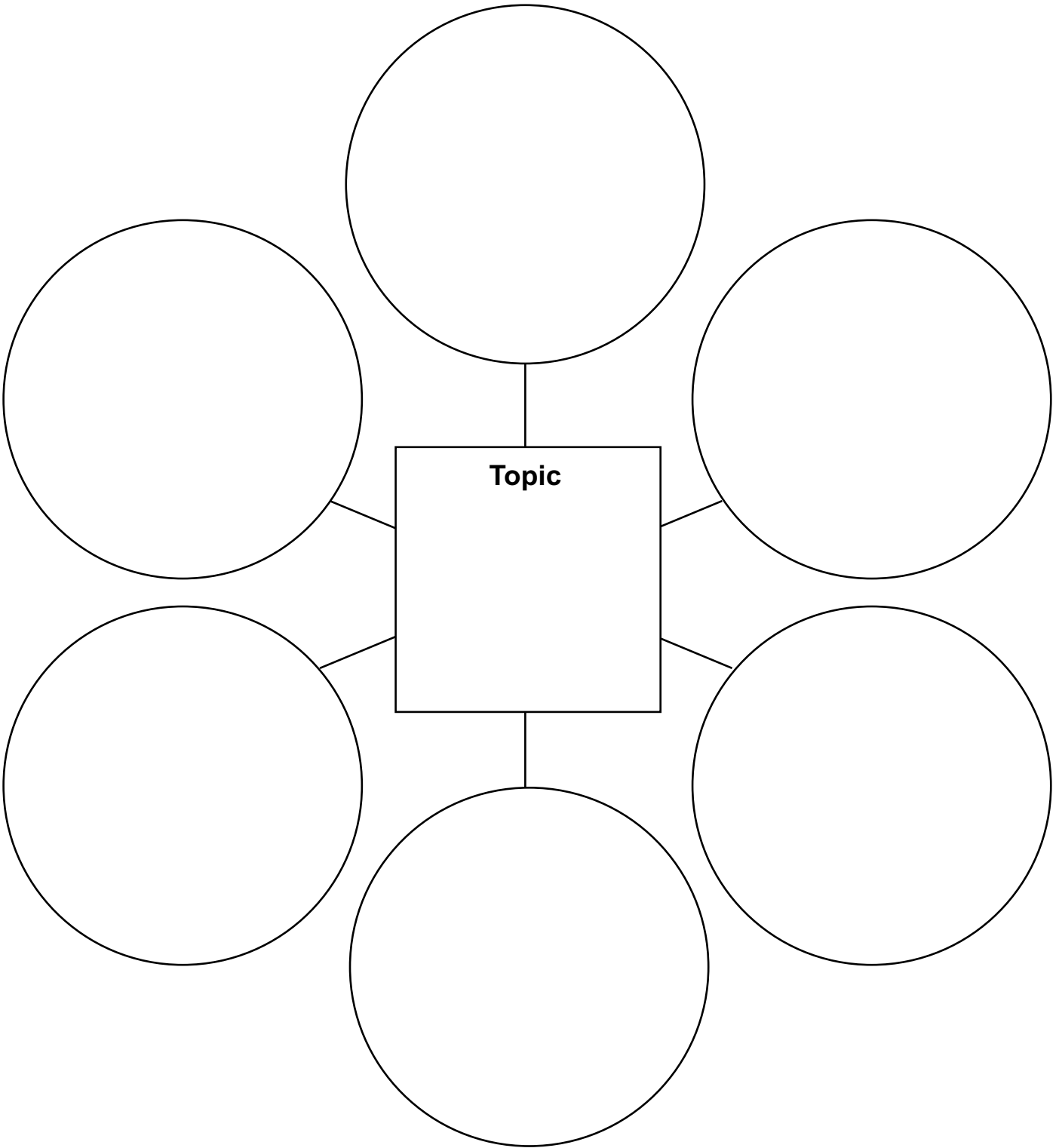
T-Chart

Add details to each column.

Subject:	Subject:

Cluster/Word Web 3

Write details about your topic in the circles.



Name _____

Date _____

Class/Subject _____

Teacher _____

Web Site Profiler

Name (URL)	
Sponsor	Date
Point of View	Expertise
Reaction	

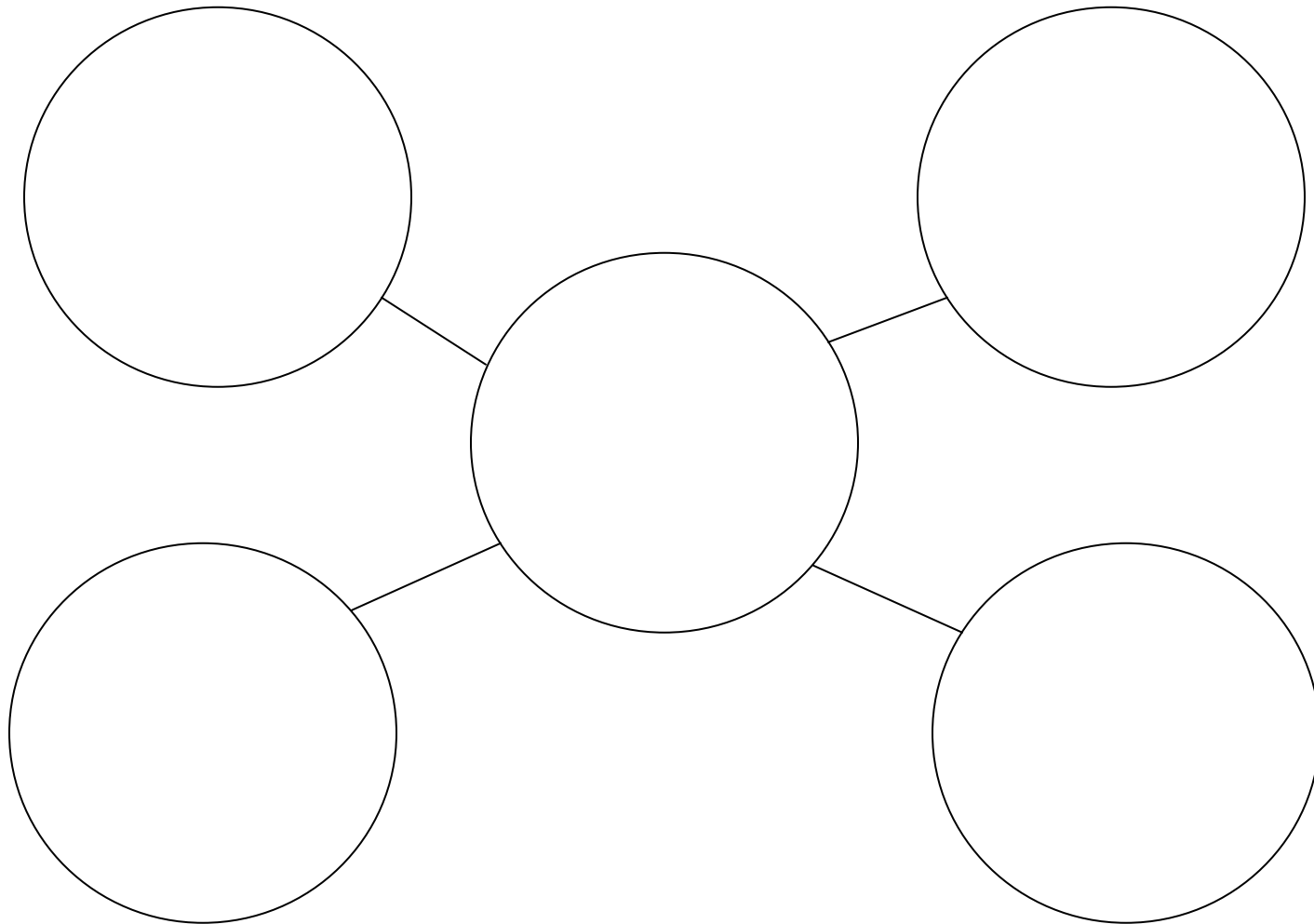
Name _____

Date _____

Class/Subject _____

Teacher _____

Wheel & Spoke Diagram



Name _____ Date _____

Step-by-Step Chart

Write each step in order. Add details.

Materials _____	
Steps	Details
Step 1:	
Step 2:	
Step 3:	
Step 4:	
Step 5:	

A message about the first day of teaching.

Source: A website dedicated to teachers helping teachers.

The following plea for help has come from a newly appointed teacher who wishes to remain anonymous.

On the first day of my teaching career, I defined a rational number to my class as a number that can be expressed as a ratio of integers. A student asked me: What exactly are ratios? How do ratios differ from fractions? I gave some answers that I was not satisfied with. So, I consulted some other teachers and texts. The result was confusion.

I find that opinions and texts vary about the definitions of these terms. Please tell me how ratios, rational numbers and fractions should be defined to make their distinguishing properties meaningful to the high school students. To convince you why it is confusing, I am giving below a sample of definitions of ratios and fractions from different texts.

'A comparison of two quantities by division is a ratio.'

'A fraction is a comparison of two numbers. Another word for the comparison of two numbers is ratio.'

'A ratio is the comparison of two quantities that have the same units.'

'A ratio of two quantities is their quotient. For example, the ratio of 3 oranges to 5 oranges is $3/5$.'

'A ratio is a comparison of two quantities, usually expressed as a fraction. In fact, a fraction is frequently called a 'rational number,' because one meaning of the word rational is 'having to do with ratios'.'

'An indicated quotient of two numbers is often called a ratio.'

'For any two positive numbers, a and b, the ratio of a to b is a/b . This is sometimes written as $a : b$.'

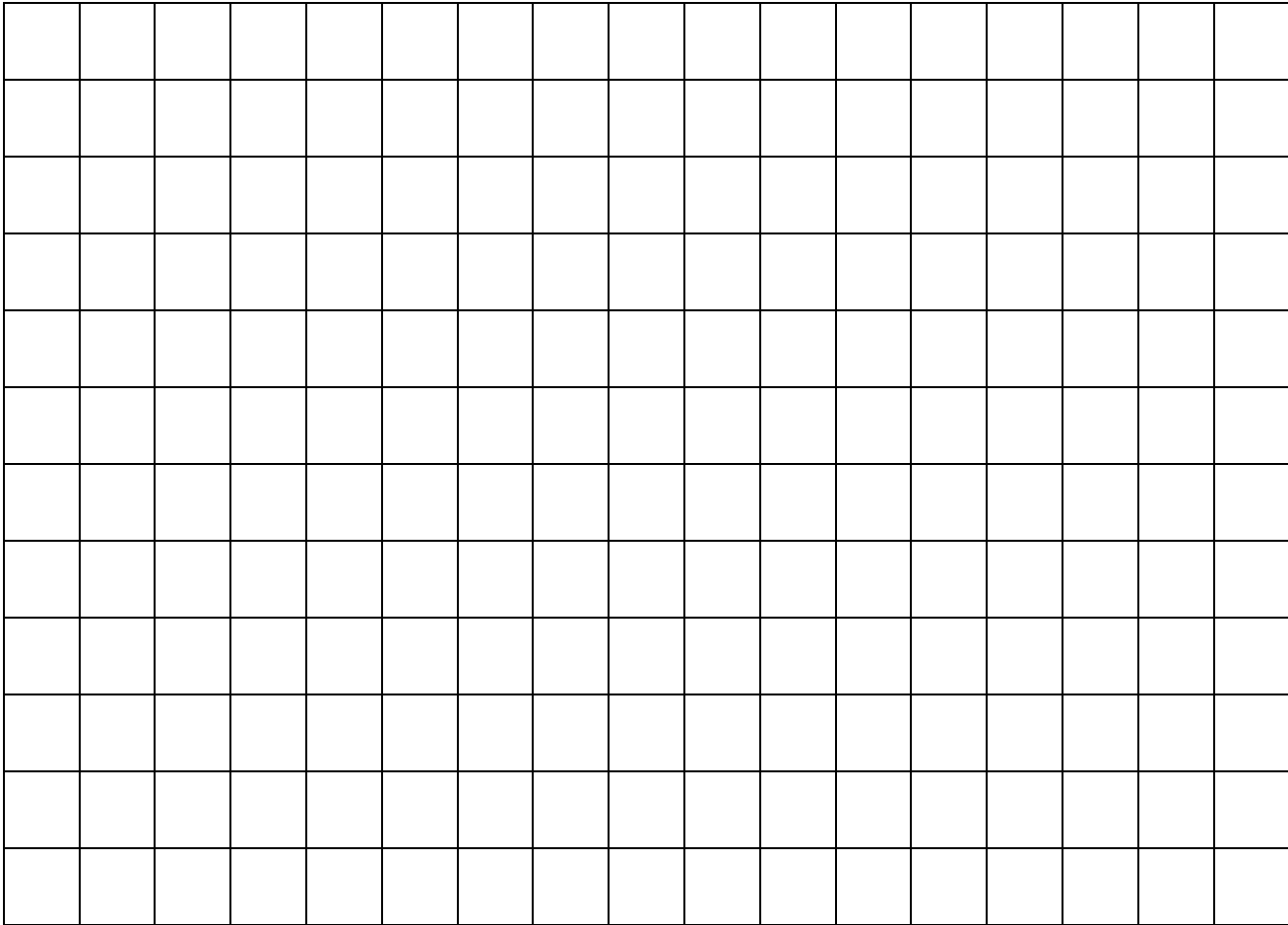
'Any fraction may be considered as a ratio of its numerator to its denominator.'"

The website included some recommendations. One teacher suggested a word chart. How could such a graphic organizer help this teacher's students get and stay clear?

Term	Explanation	Example

Quantitative Reasoning: Analyze Patterns

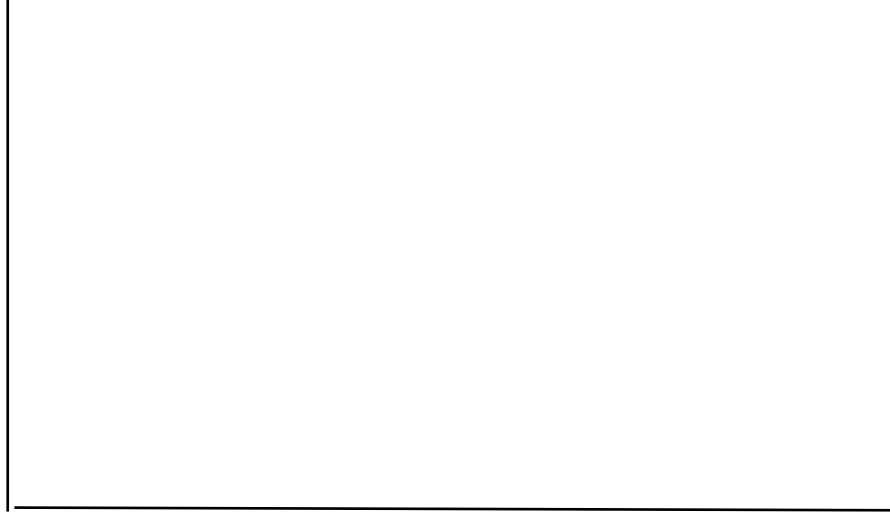
Title: _____



 Explain what the graph shows. _____

BAR GRAPH

Title of the Graph

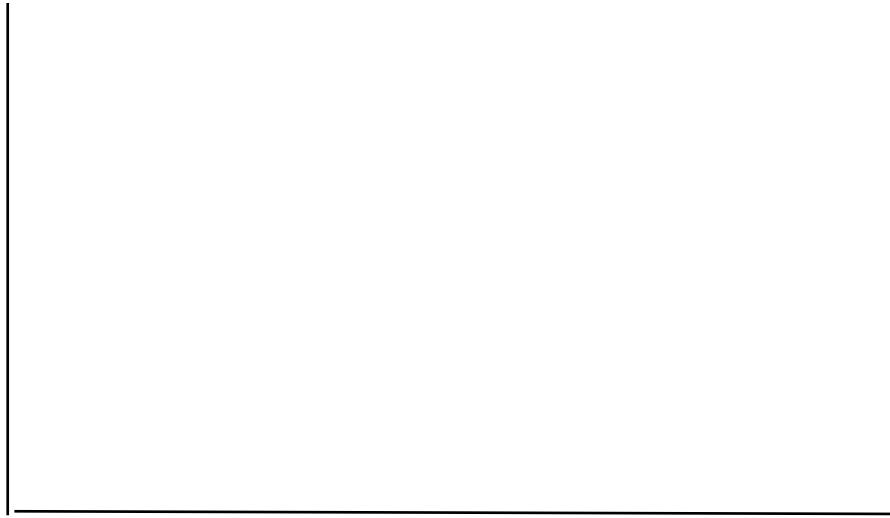


Analysis of the Graph

LINE GRAPH

Use quantitative information about something that changes over time.

1. *Locate and collect information about a situation that changes over time.*
2. *Use that information to make a line graph.*



Title of the Graph

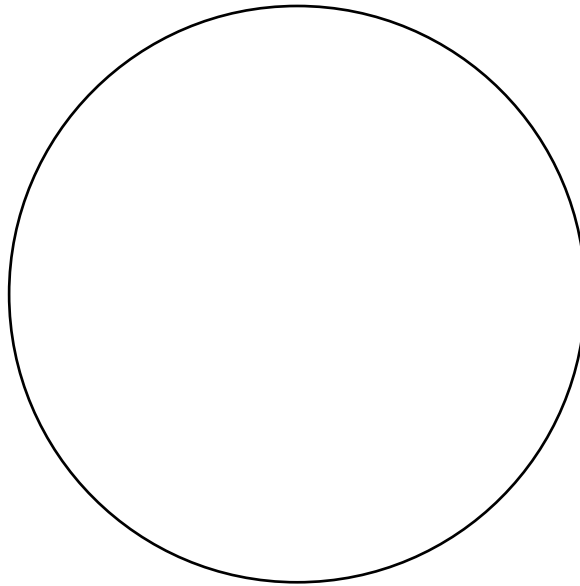
Analysis of the Graph

GRAPH PROPORTIONS

1. *Locate and collect information about a topic or situation.*

Topic/Situation: _____

2. *Use that information to make a circle graph.*



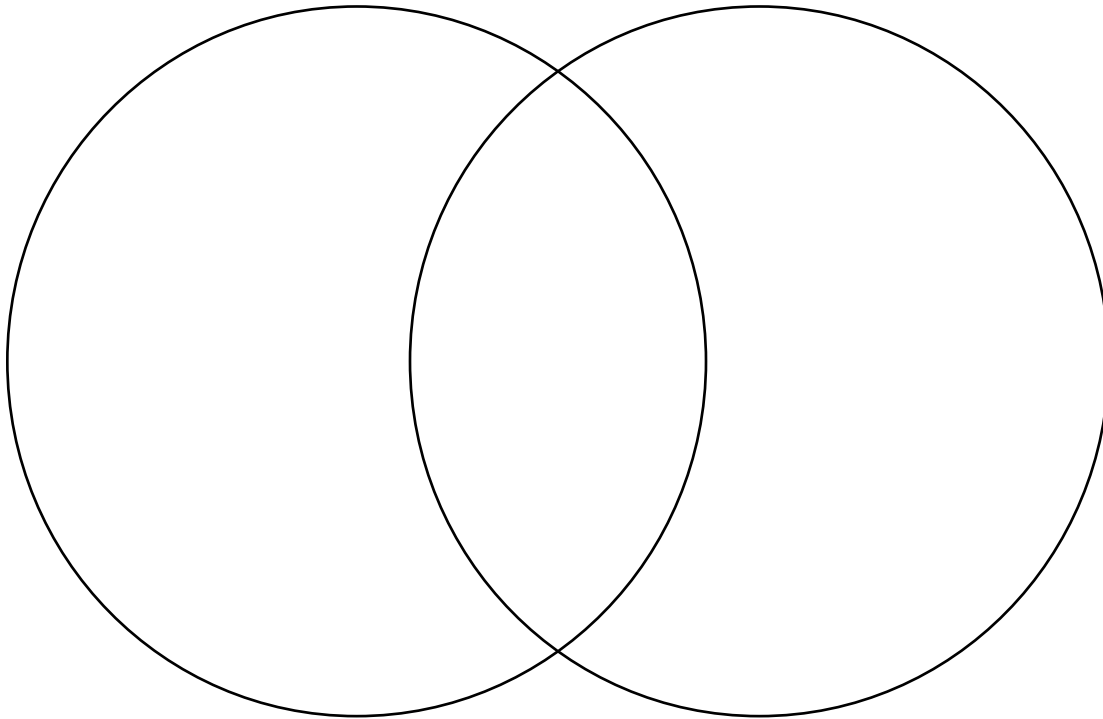
Title of the Graph

Key:

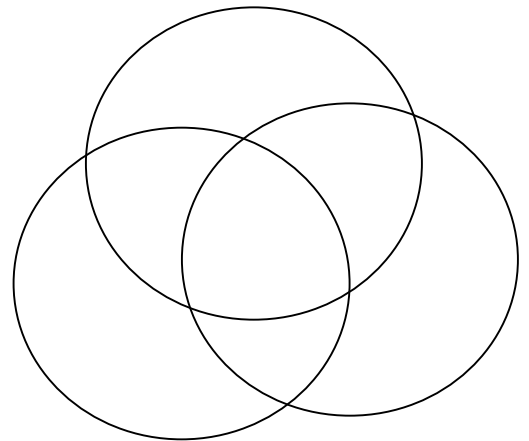
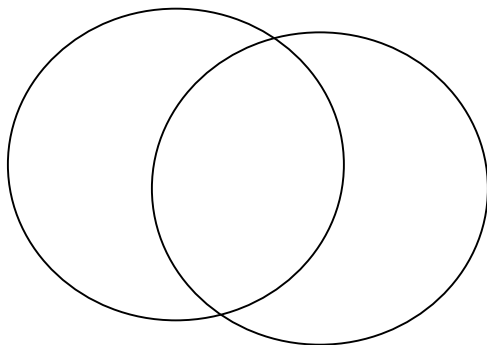
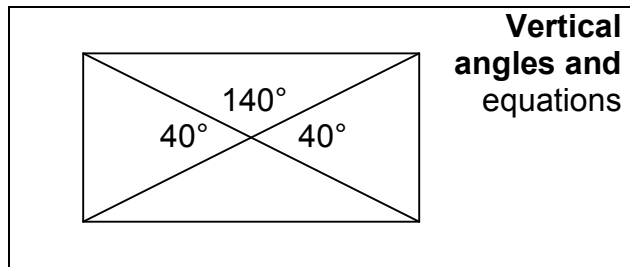
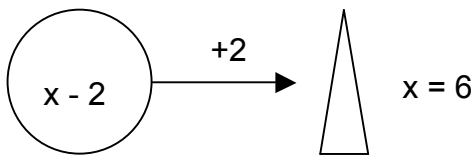
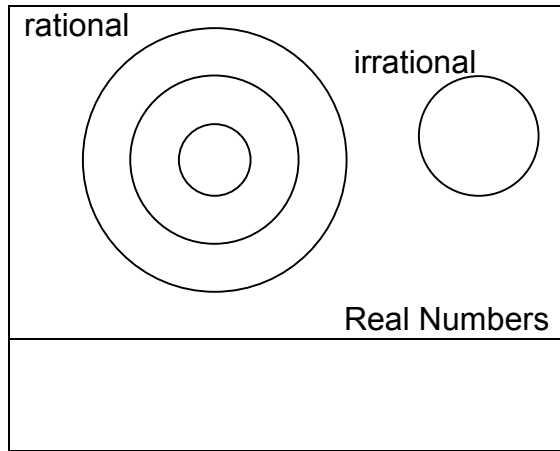
Analysis of the Graph

Show Differences and Similarities

Title: _____



 *Explain what your Venn diagram shows.*



Long Division Algorithm

Example

$$\frac{4x^3 - 11x - 4}{2x - 3}$$

Procedure



Divide first terms.



Multiply times the divisor.



Subtract by changing the signs and adding.

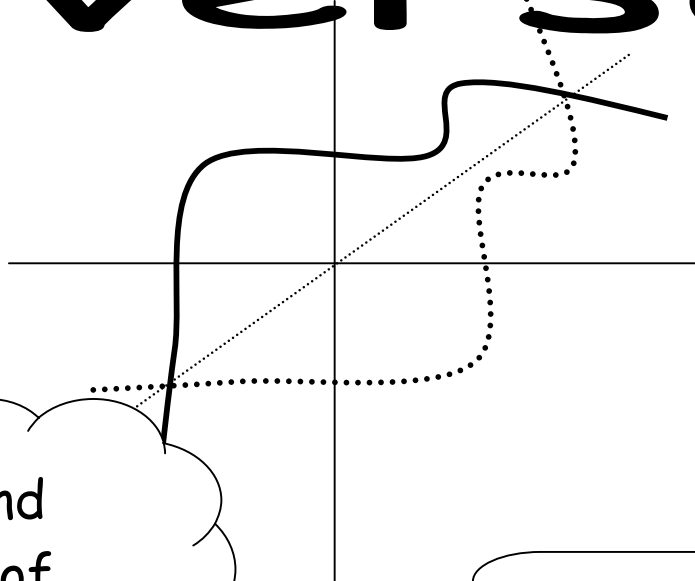


Bring down the next term and begin the process again.

Your Turn

$$\frac{6x^3 + x^2 + 4x - 5}{3x + 2}$$

Inverses



How do I find the inverse of a function?

EXAMPLE
 $f(x) = 3x^2 - 8$

Switch to the $y =$ notation from the $f(x) =$.

Exchange x and y in the problem and solve for y .

Rewrite as $f^{-1}(x) =$.

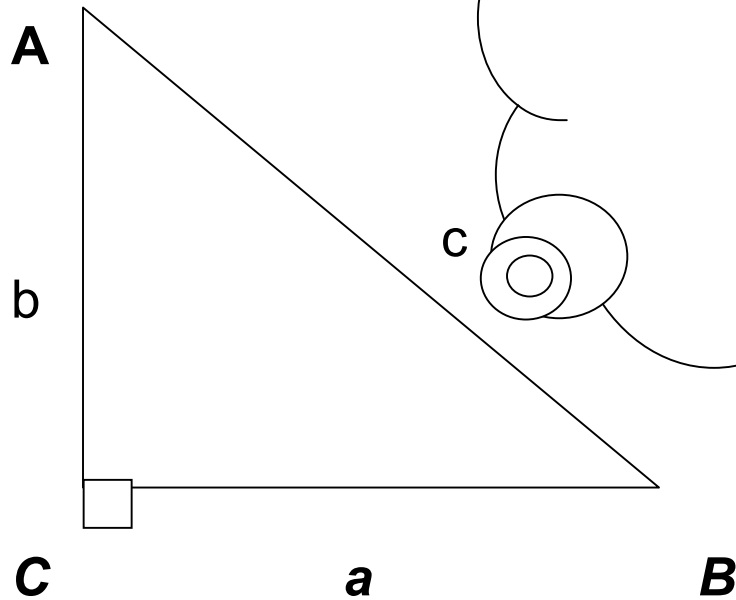
[Empty box for the original function]

[Large empty box for solving for y]

[Empty box for the inverse function]

Graphic Organizer by Dale Graham and Linda Meyer
Thomas County Central High School; Thomasville GA

How do you
use the
Pythagorean
Theorem?



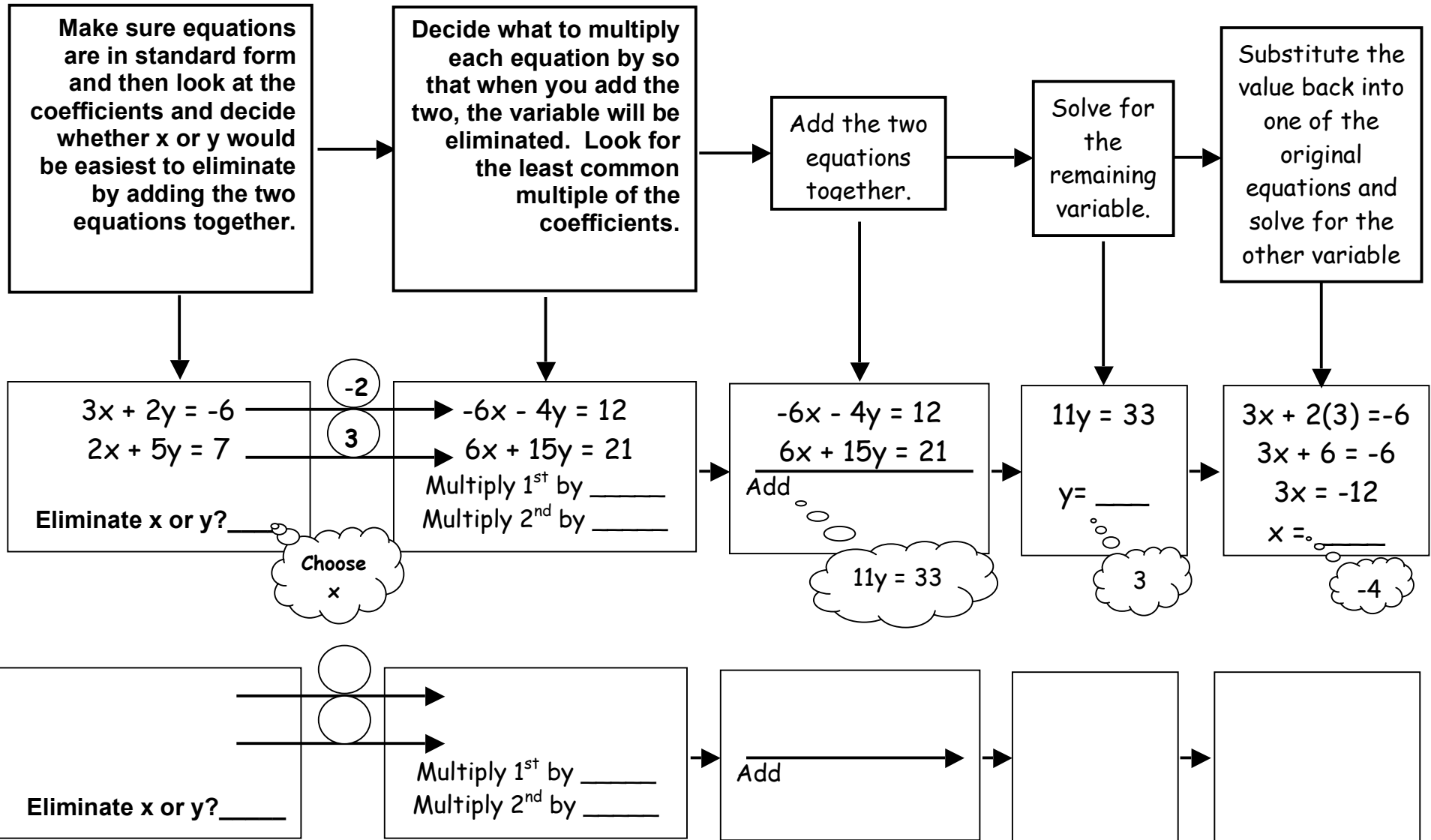
$$c^2 = a^2 + b^2$$

When c is unknown:

When a or b is unknown:

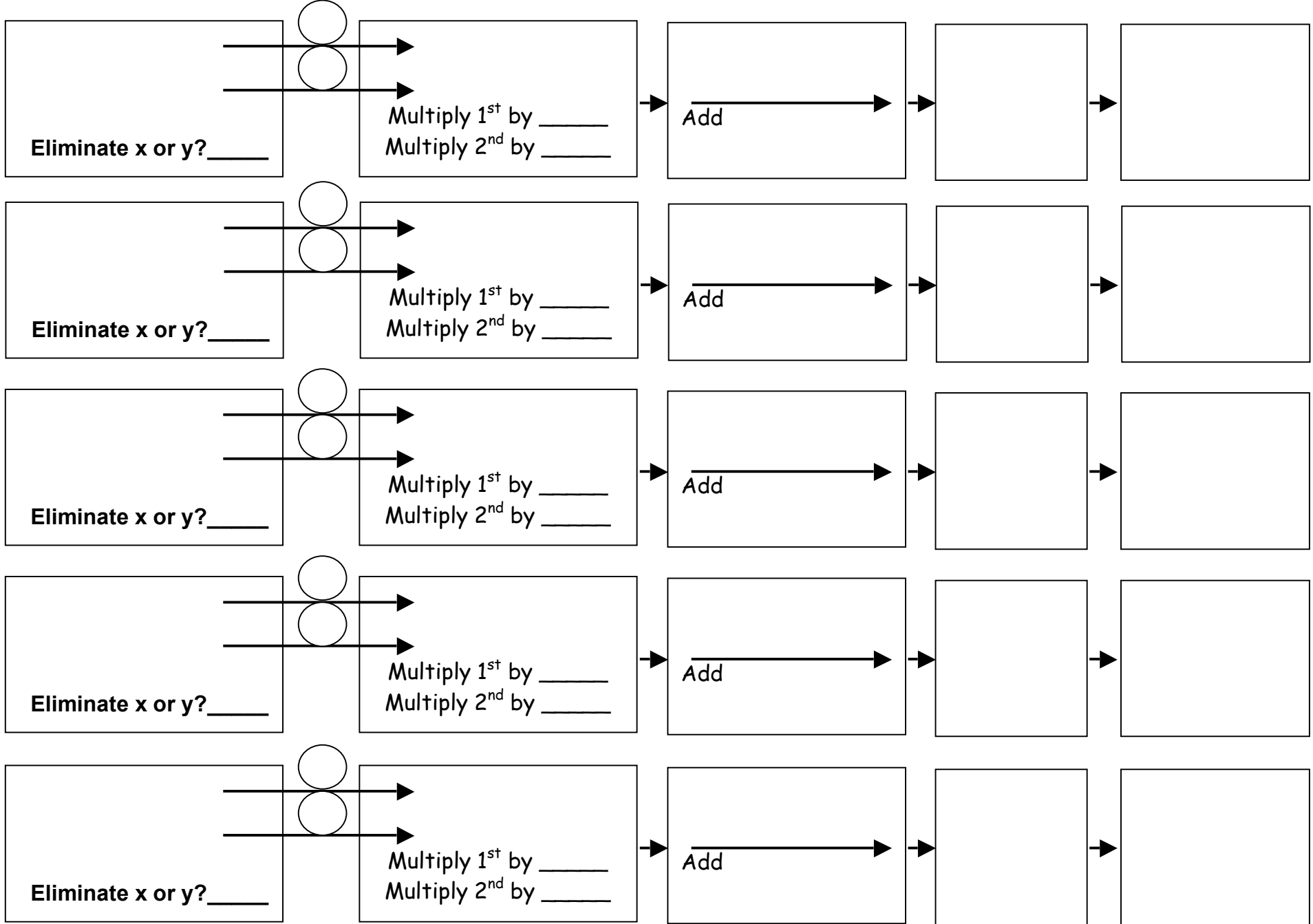
Graphic Organizer by Dale Graham and Linda Meyer
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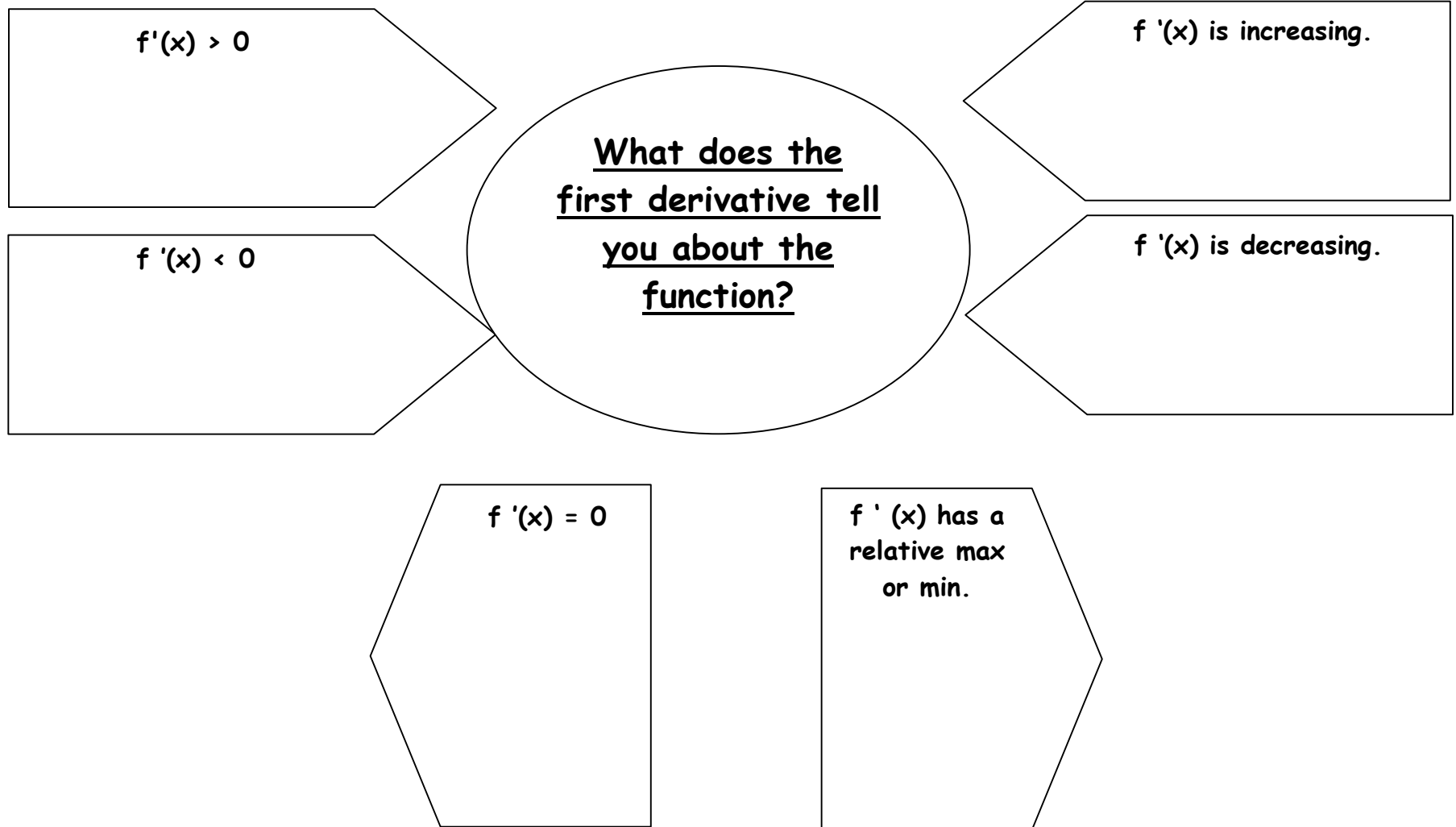
How Do You Solve a System of Equations by Linear Combination?



Graphic Organizer by Dale Graham and Linda Meyer

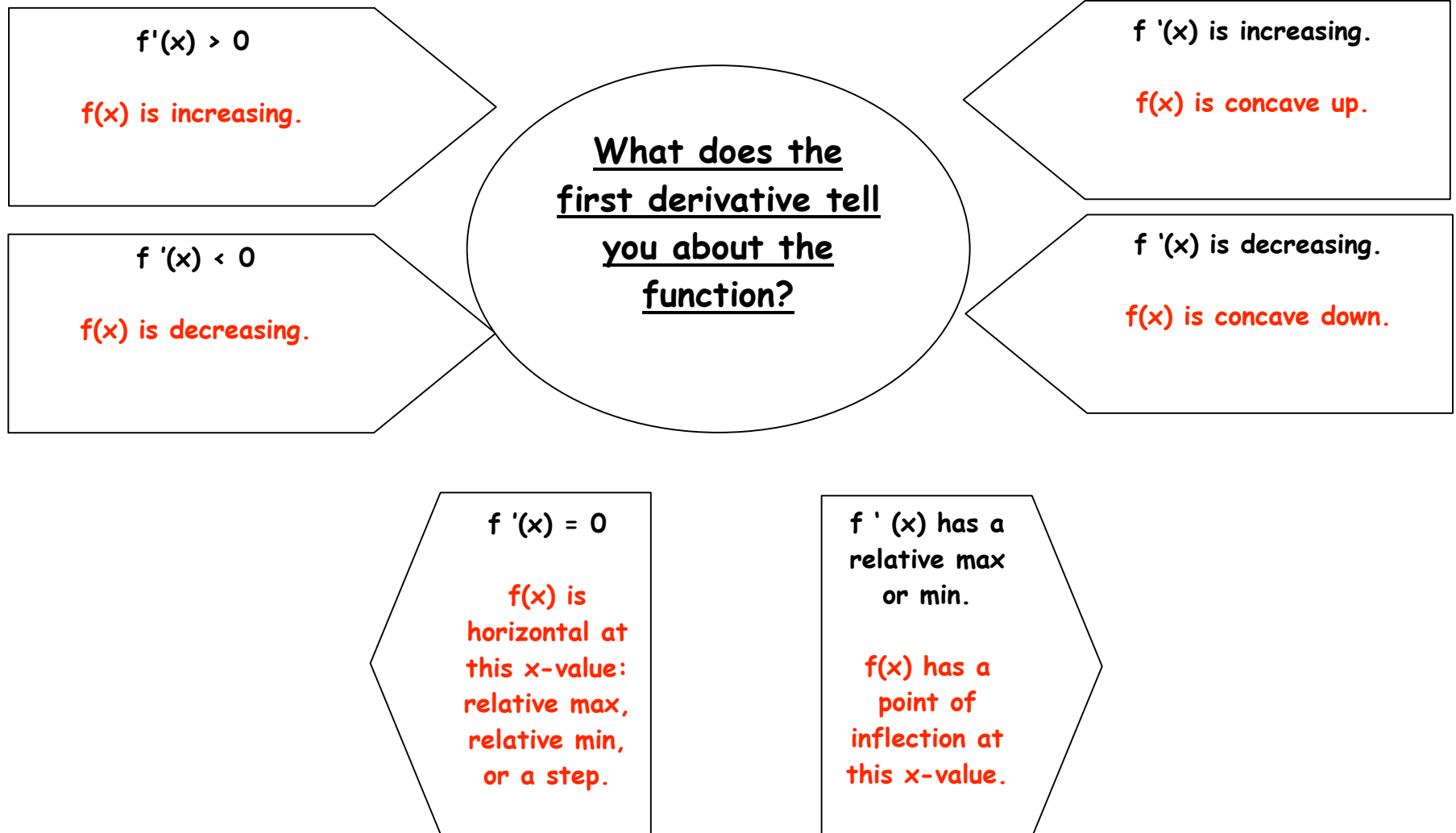
<http://www.sw-georgia.resa.k12.ga.us/Math.hgeorgia.resa.k12.ga.us/Math.html>





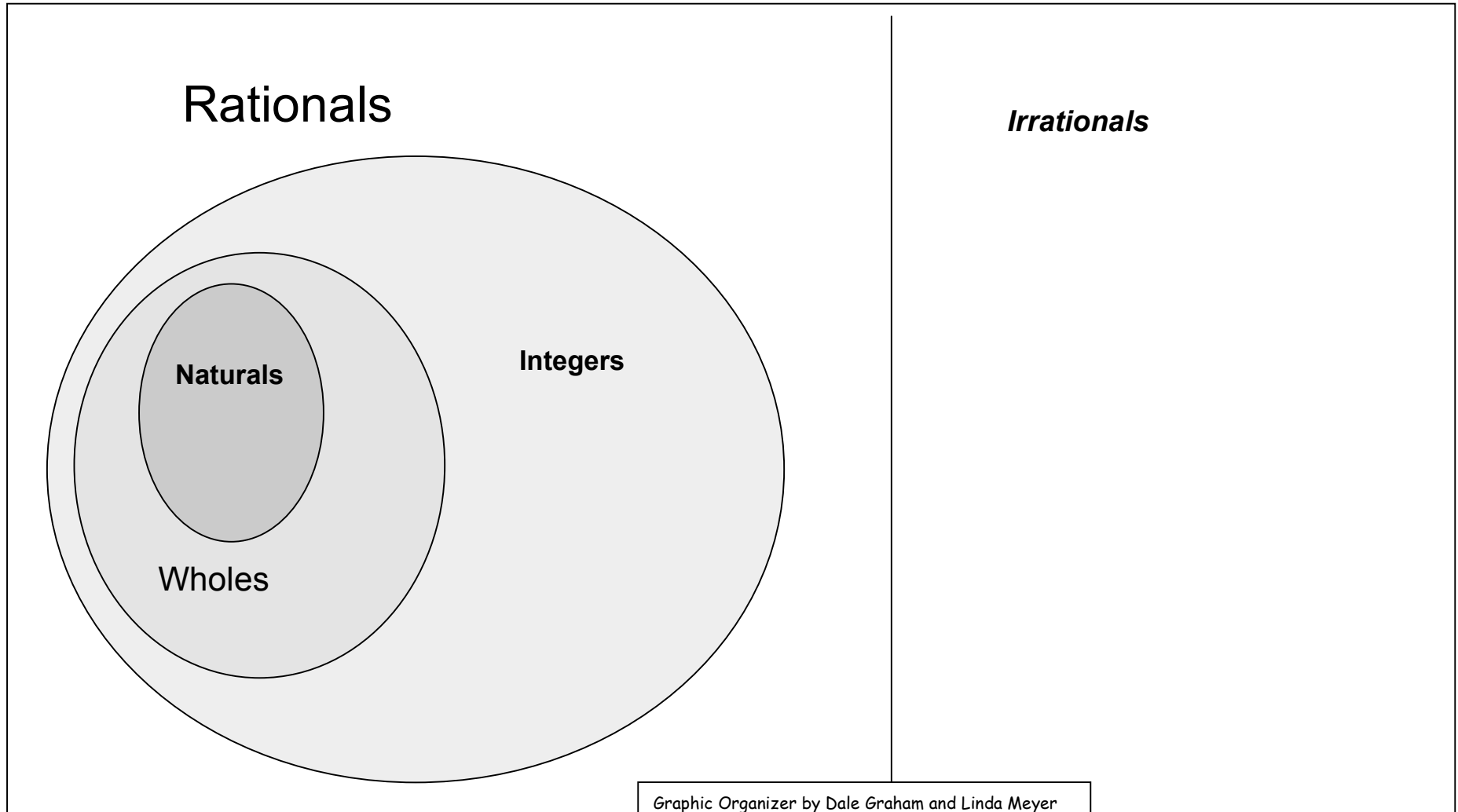
Graphic Organizer by Karen Capuano

Possible Answers



What are the different types of numbers?

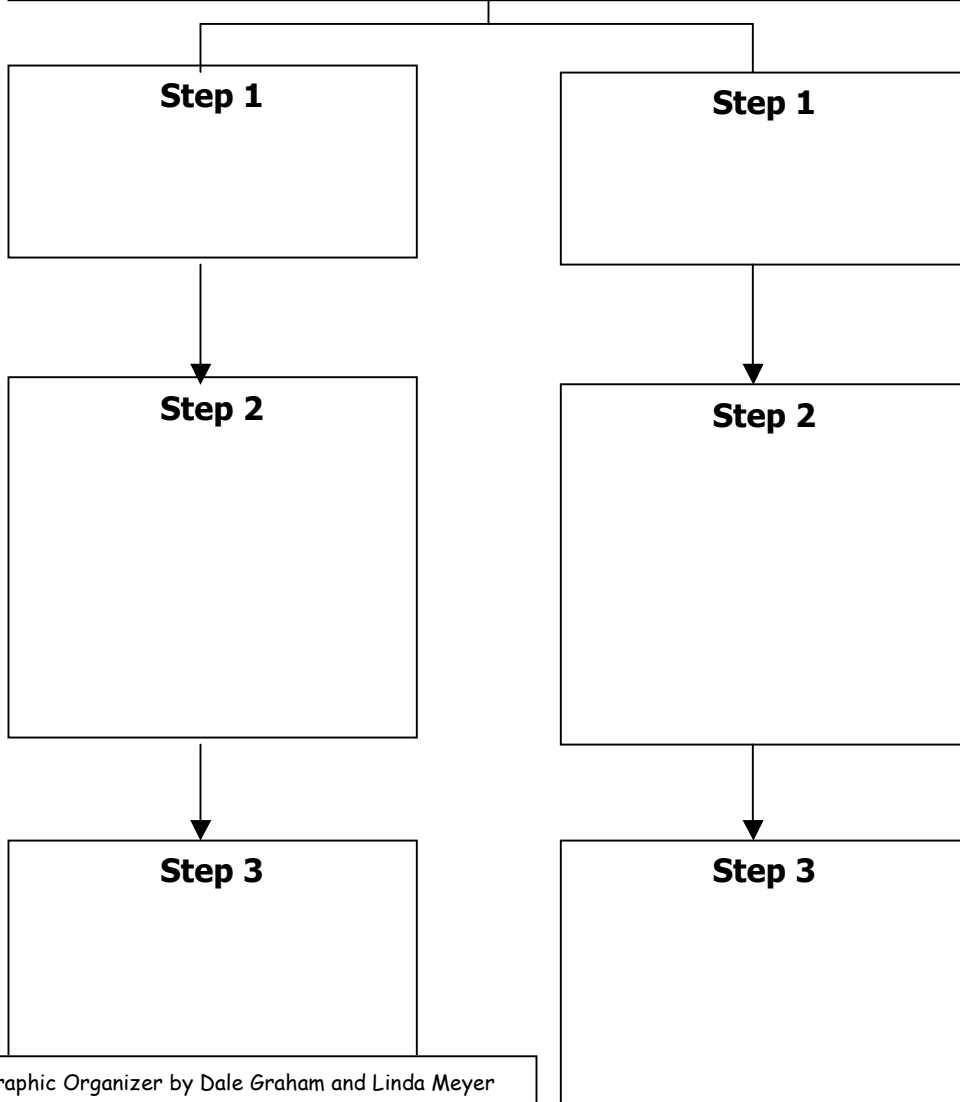
Real Numbers



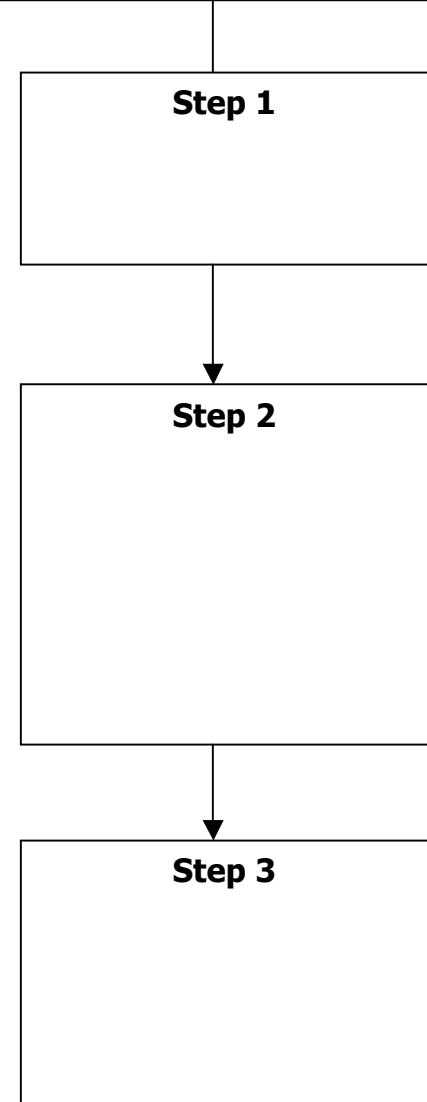
Graphic Organizer by Dale Graham and Linda Meyer
Thomas County Central High School; Thomasville GA

How do you find the slope of a line given two points on the line?

Given: A line that passes through (3,-6) and (1, 8)

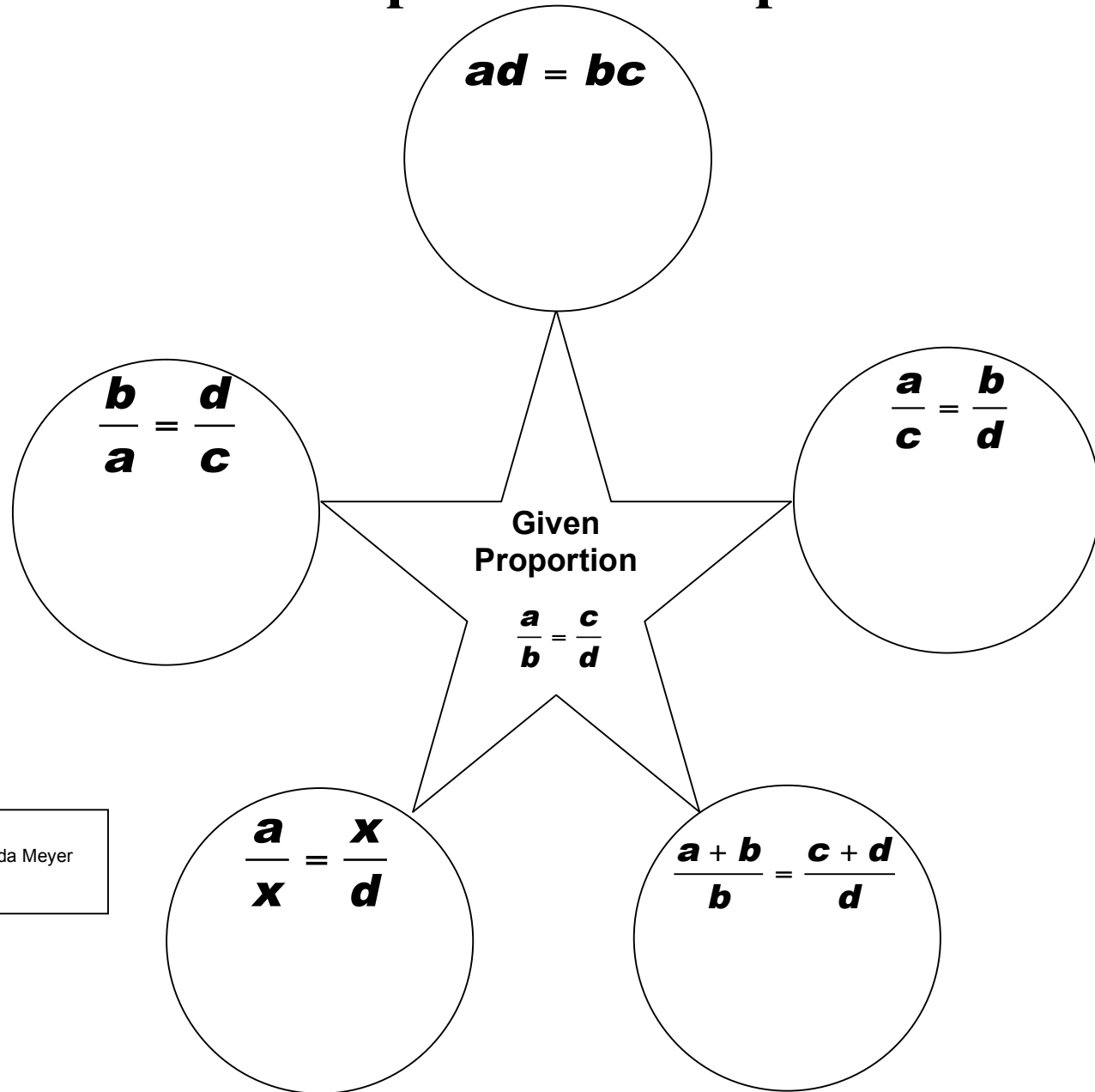


Example:



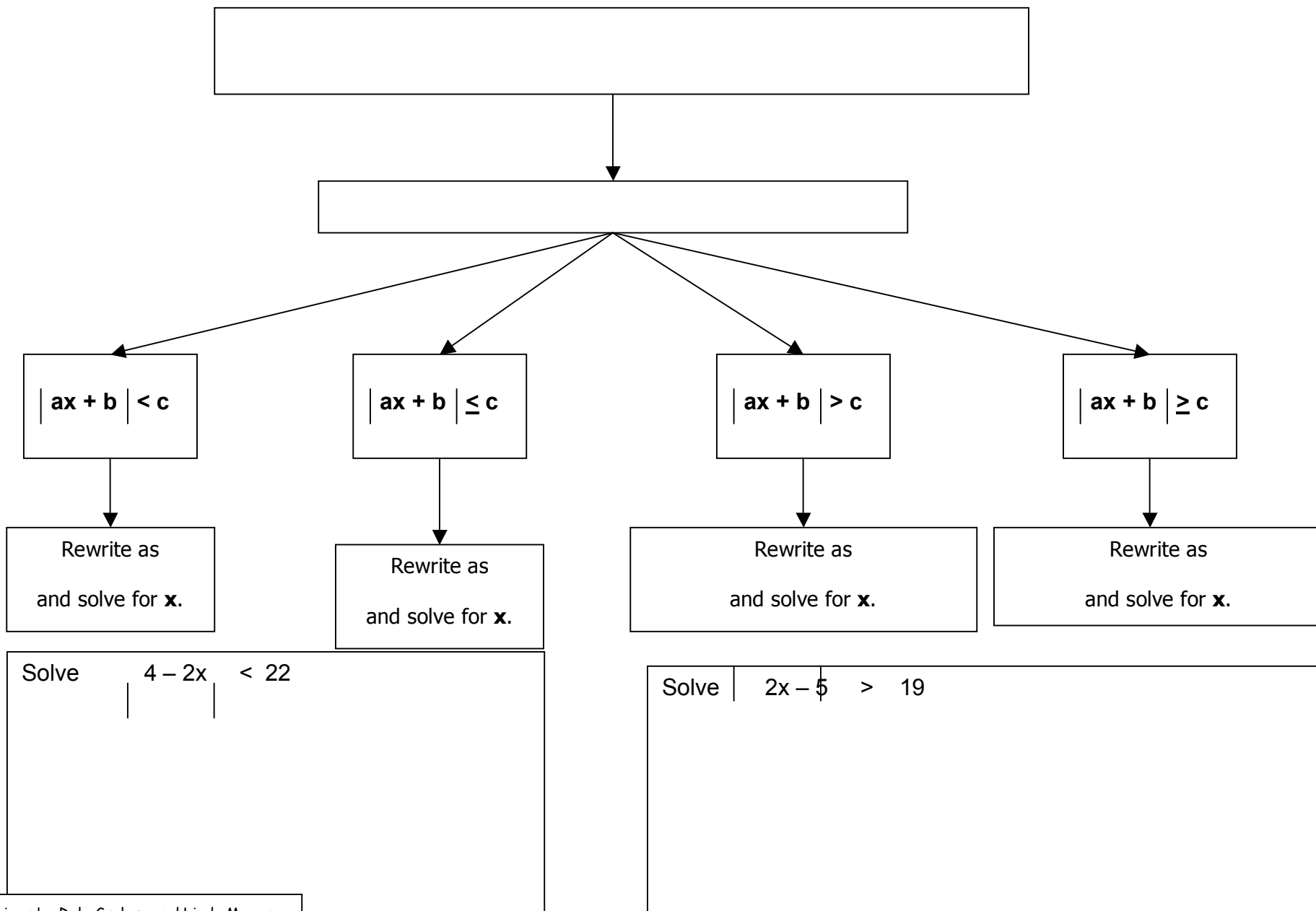
Graphic Organizer by Dale Graham and Linda Meyer
Thomas County Central High School; Thomasville GA

What Are the Properties of Proportions?



Graphic Organizer by Dale Graham and Linda Meyer

How do you solve absolute value inequalities?



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