

SpiralEd Solutions

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CAMT 2023

Spiraling to Success

Let's Talk Math: Having the Words to Talk the Talk

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Learning how to learn...for math and for life.

Vocabulary

- Having the words to “talk the talk”....developing useful vocabulary.

Wall Work

- Having the moves to “walk the walk”...active engagement and accountability.

Spirals

- Having the questions to “think great thoughts”...one more round.

Vocabulary

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**Spiraling to Success:
having the words to
“talk the talk”**

Vocabulary



Why academic content vocabulary?

“The sum of three consecutive even whole numbers equals the product of the cube root of twenty-seven and the second number. What are the three numbers?”

Vocabulary

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«Το άθροισμα τριών διαδοχικών ζυγών ακέραιων αριθμών ισούται με το γινόμενο της κυβικής ρίζας του είκοσι επτά και του δεύτερου αριθμού. Ποιοι είναι οι τρεις αριθμοί;»

Vocabulary

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What doesn't work....

Mean:

the value obtained by dividing the sum of several quantities by their number

- Doing nothing
- Just “telling”
- Pure definitions
- Punitive vocabulary
- Biting off too much

Vocabulary

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What does work....

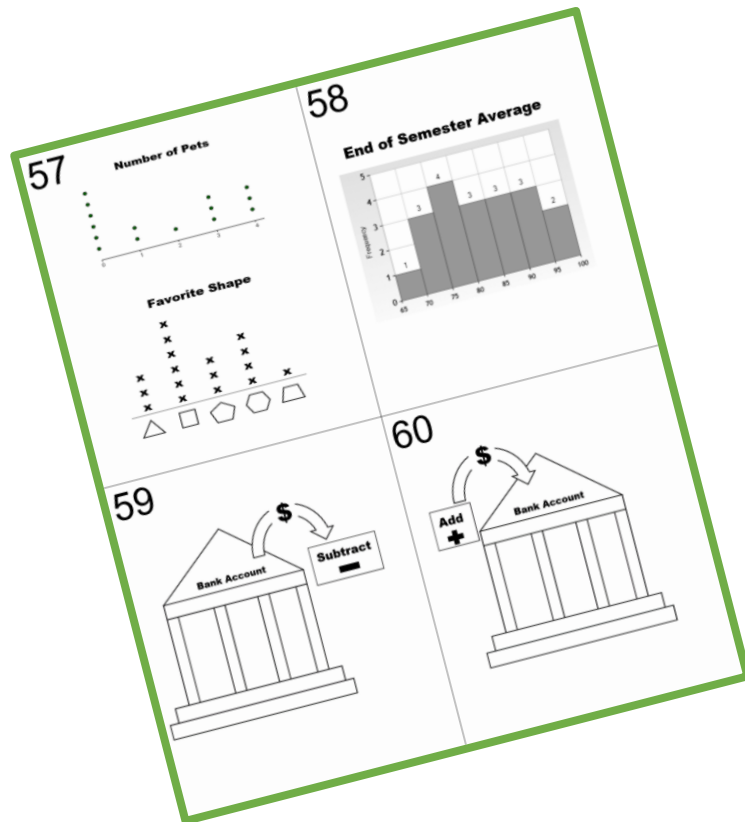


- Start the year with intent.
- Have a reasonable plan.
- Hold yourself accountable.
- Work the plan.
- Celebrate small victories.

Vocabulary

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The Plan....



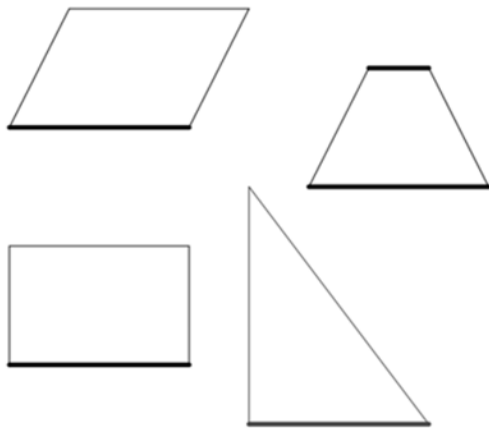
- Visual examples
- Four words per week
- Complete in the first semester
- Varied, daily practice
- Accountability

Vocabulary

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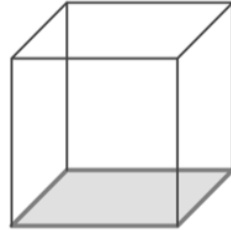
48

The length of an edge of a polygon,
used to find the area.



49

The area of one face of a prism,
used to find the volume.



51

M i d ★ d l e

#1 order numbers

#2 find the middle

5, 2, 3, 4, 6

2, 3, 4, 5, 6



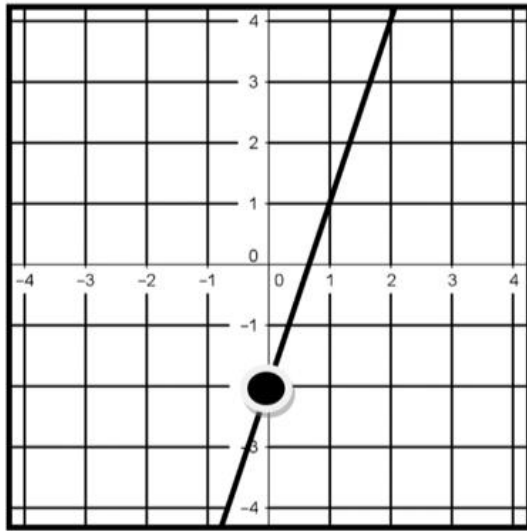
a measure of center

Vocabulary

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10

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$(0, -2)$

12

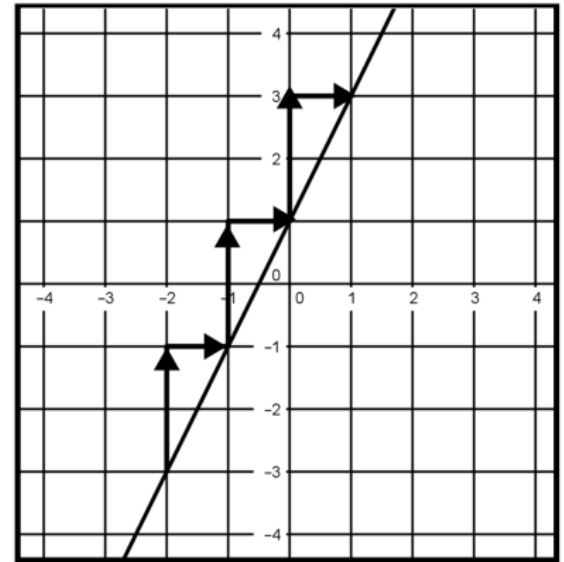
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$$y = mx + b$$

Four black arrows point towards the variables in the equation: one to 'y', one to 'm', one to 'x', and one to 'b'.

4

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$m = 2$

Vocabulary

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SpiralEd Solutions Vocabulary Cards Directions

- Prepare a set of cards for each student. This can be done on cardstock, colored paper, or plain paper; or have a class set of cards with enough cards for each pair of students to work. Sets can be reused each year.
- Distribute and introduce 4 cards each week. This will facilitate introduction of the entire deck the first semester of school.
- Have students write the information listed below on the back of the appropriate card.
- Have students interact with cards for a few minutes each day. Vary activities, teaching students how best to benefit from vocabulary cards. With only four new cards a week, students are not overwhelmed.
- Test student progress every few weeks with the quizzes provided. Students must understand that as the deck grows, they are responsible for all words to date.
- Play games with the cards. Make the experience as fun and positive as possible.
- Acknowledge students who use vocabulary from the cards in classroom conversations.
- The cards do not follow the usual Algebra I scope and sequence. They are somewhat random. This is intentional. Students are not learning vocabulary for a given unit, but for Algebra, as a whole. Frontloading future vocabulary helps students master new concepts more quickly.

Card 1 **x-intercept**, $y = 0$

Card 2 **y-intercept**, $x = 0$

Card 3 **solution to a system of equations**

Card 4 **system of equations with no solution**, parallel lines, $m = m$

Card 5 **vertical line**, no slope, undefined, not a function, written $x =$

Card 6 **horizontal line**, $m = 0$, function, written $y =$

Card 7 **positive slope**

Card 8 **negative slope**

Card 9 **vertex**

Card 10 **roots, solutions, zeros, x-intercepts**

Card 11 **axis of symmetry**

Card 12 **y-intercept in equation**, flat rate

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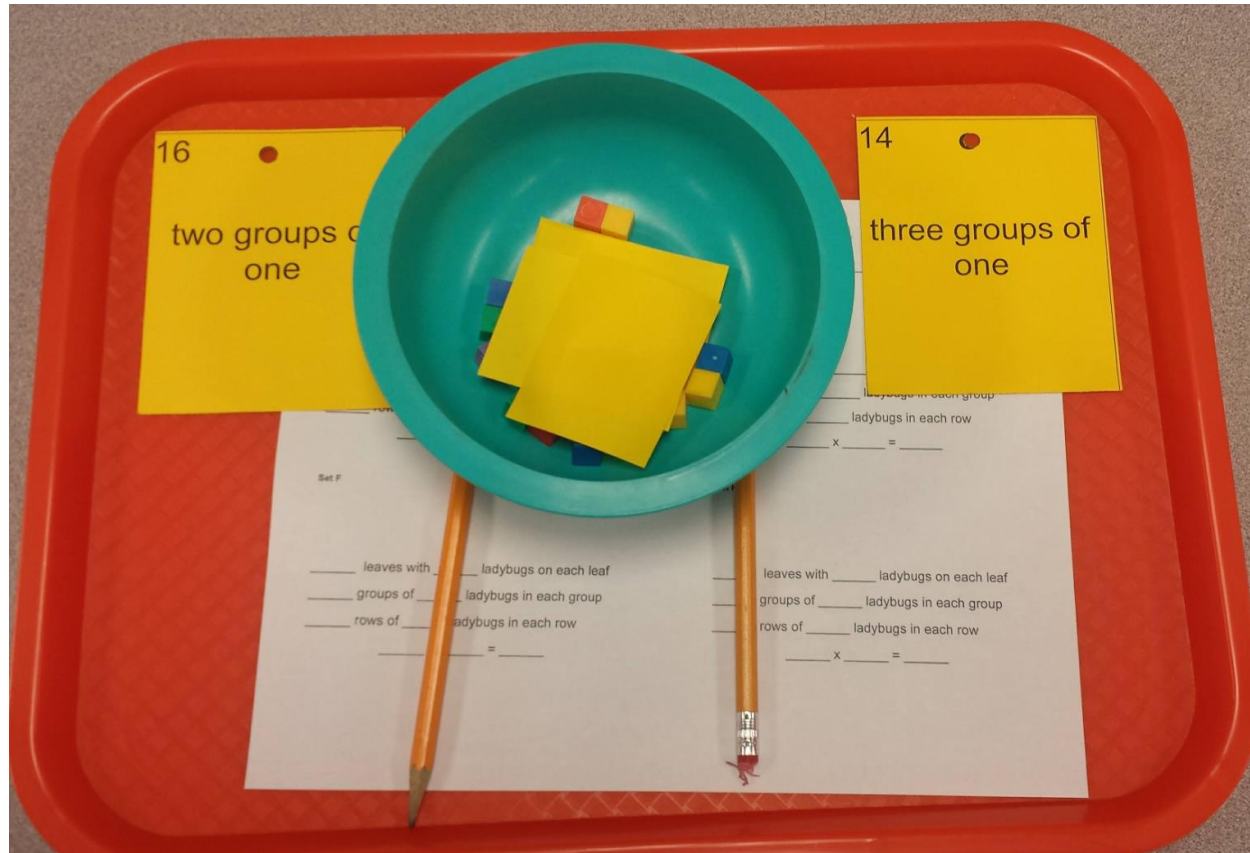
Teacher File

Vocabulary

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Student management....

Card management....



Vocabulary

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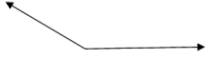
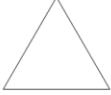


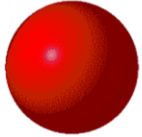
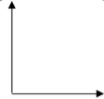



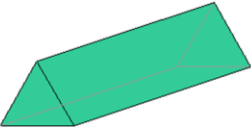
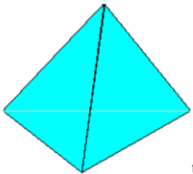
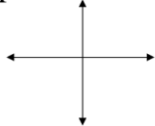


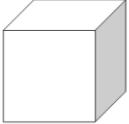










Have fun....



- Using flash cards
- Back Talk
- Table work
- One Up
- Strong questions
- Flyswatter
- What's the question?
- Know the difference
- Bingo
- Wall Work
- 20 Questions

Vocabulary

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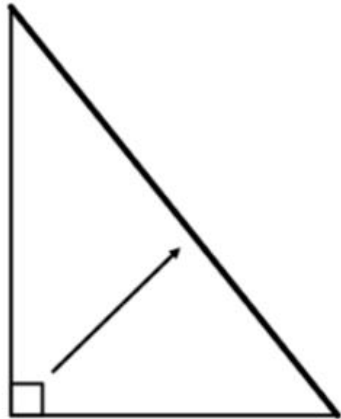
<p>square</p> 	<p>rectangle</p> 	<p>cylinder</p> 	<p>hexagon</p> 	<p>acute angle</p> 	<p>obtuse angle</p> 
<p>equilateral triangle</p> 	<p>right triangle</p> 	<p>square pyramid</p> 	<p>sphere</p> 	<p>right angle</p> 	<p>parallel lines</p> 
<p>trapezoid</p> 	<p>parallelogram</p> 	<p>triangular prism</p> 	<p>triangular pyramid</p> 	<p>perpendicular lines</p> 	<p>intersecting lines</p> 
<p>rhombus</p> 	<p>cube</p> 	<p>cone</p> 	<p>ray</p> 	<p>obtuse triangle</p> 	<p>octagon</p> 
<p>rectangular prism</p> 	<p>pentagon</p> 	<p>line</p> 	<p>segment</p> 	<p>translation</p> 	<p>reflection</p> 

Vocabulary

38

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**The side opposite
the right angle.**



hypotenuse

Table Work

Vocabulary

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hypotenuse

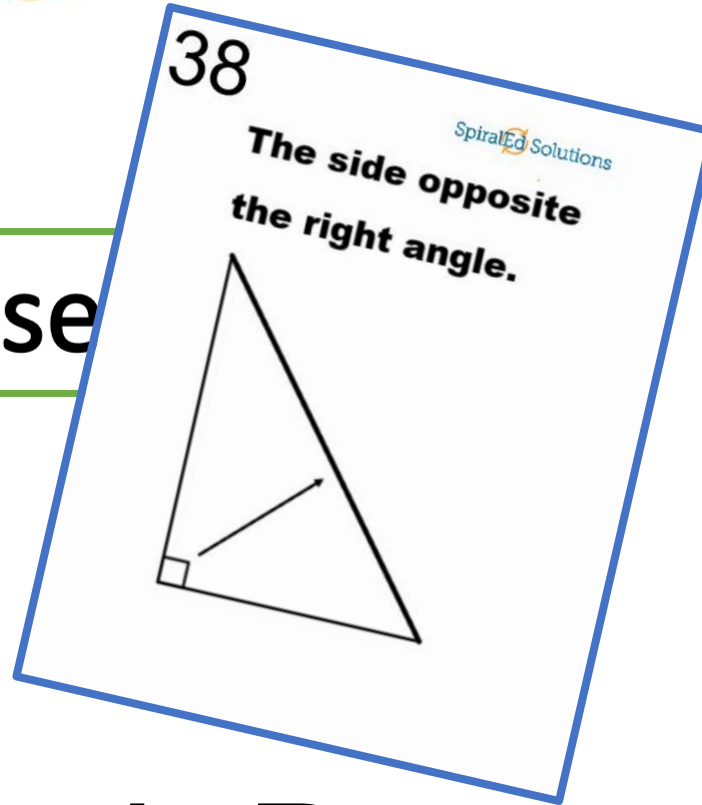


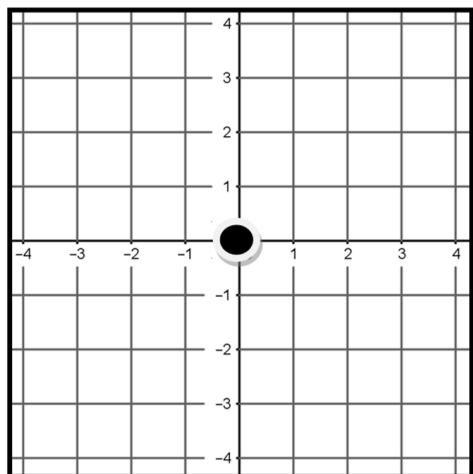
Table Work Reversed

Vocabulary

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26

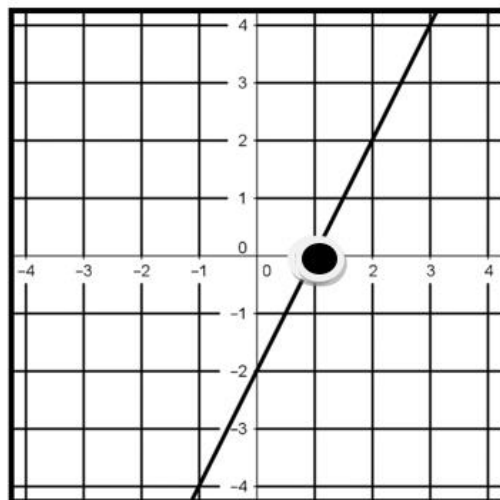
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One Up

1

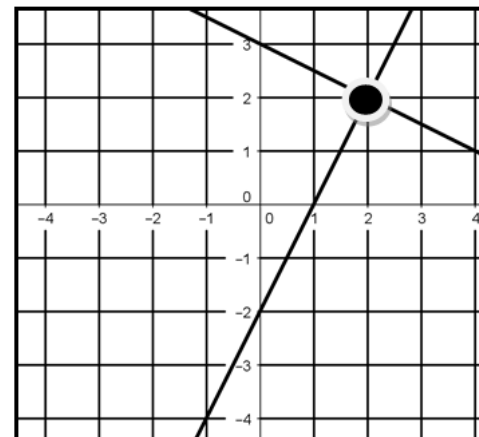
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(1, 0)

3

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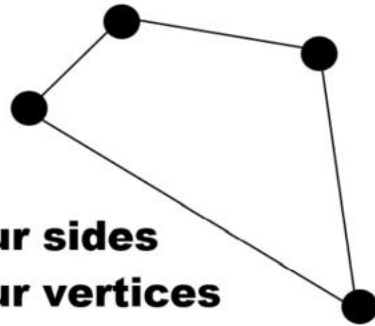
(2, 2)

Vocabulary

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44

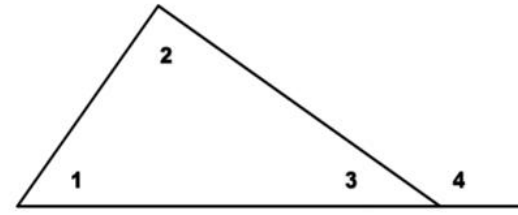
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four sides
four vertices

40

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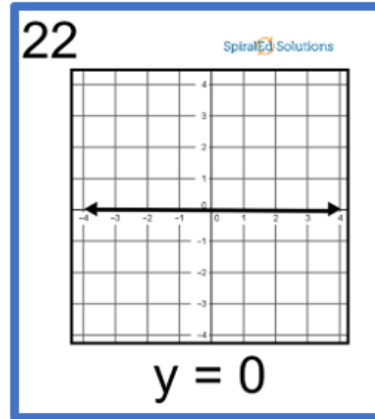


$$m\angle 4 = m\angle 1 + m\angle 2$$

What's the question?

Vocabulary

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y-intercept

x-intercept

x-variable

y-axis

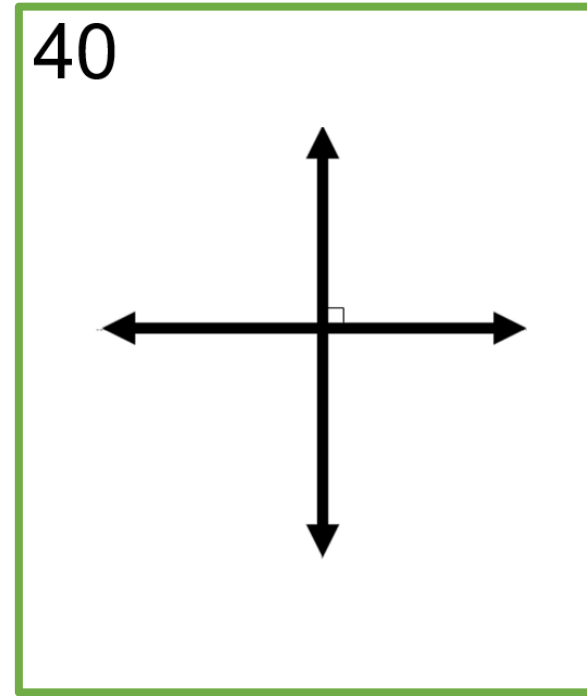
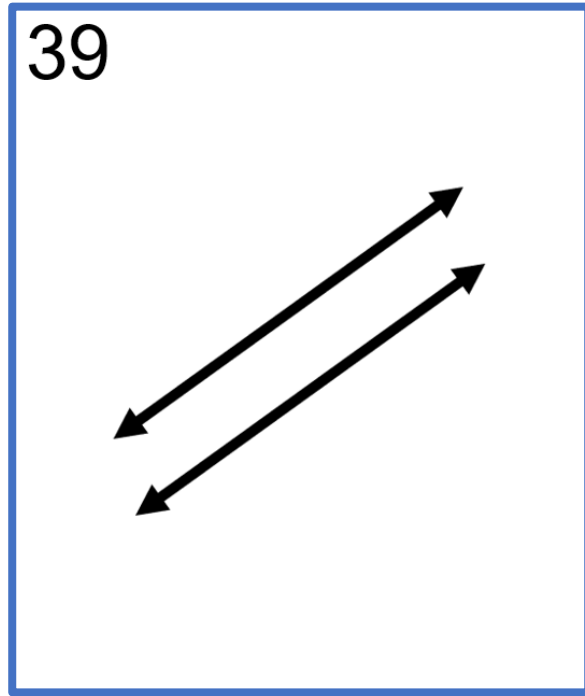
y-variable

x-axis

Flyswatter

Vocabulary

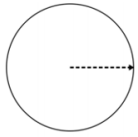

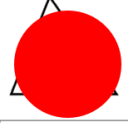

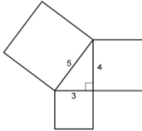
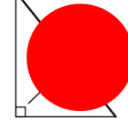
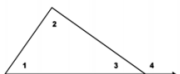
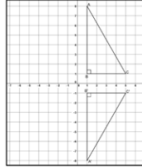
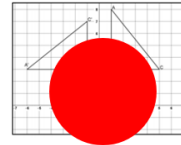
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Know the Difference

Vocabulary

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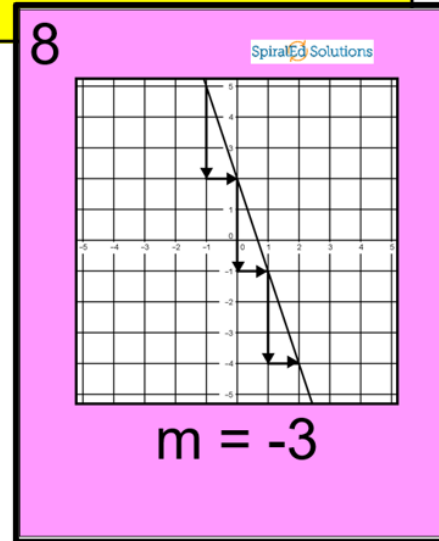
25 	30 	33  Name by angles.
37  Name by sides.	43 	38 The side opposite the right angle. 
40  $m\angle 4 = m\angle 1 + m\angle 2$	28 	27 

BINGO

Vocabulary

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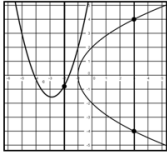
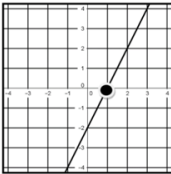



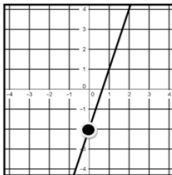
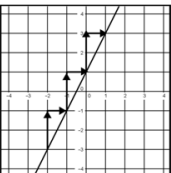
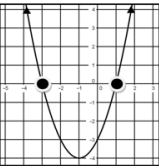
A Negative Slope



Wall Work

Vocabulary

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36 	9  $(1, 0)$	13 $3x^2$ 
15 $3x^2 + 2y - w$ 	52 Zombie Apocalypse  Day 1 - 1 zombie Day 2 - 2 zombies Day 3 - 4 zombies Day 4 - 8 zombies Day 5 - 16 zombies... Day 10 - 512 zombies... Day 20 - 524,288 zombies... Day 30 - 536,870,912 zombies	10  $(0, -2)$
4  $m = 2$	10  $x = -3$ $x = 1$	55 $\sqrt{64x^2 - 81}$ $64x^2 + 81$ $12x^2 - 81$ $\sqrt{x^2 - 9}$ $64x - 81$ $x^2 + 16$ $x^2 - 16x - 9$ $\sqrt{9x^2 - 16}$

Twenty Questions

Vocabulary

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Accountability....

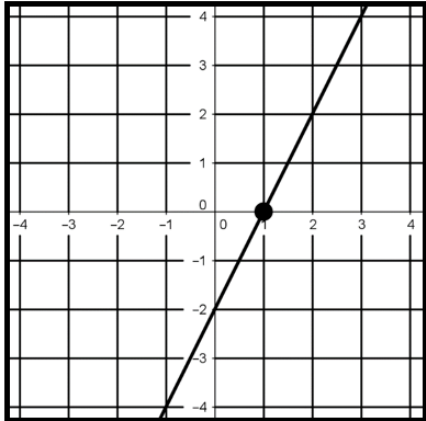
- Cumulative
- Formative
- Summative
- Increasing depth



Vocabulary

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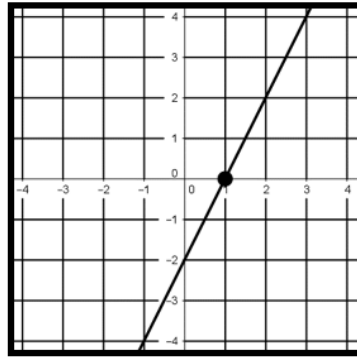
1)



Which term best describes the point?

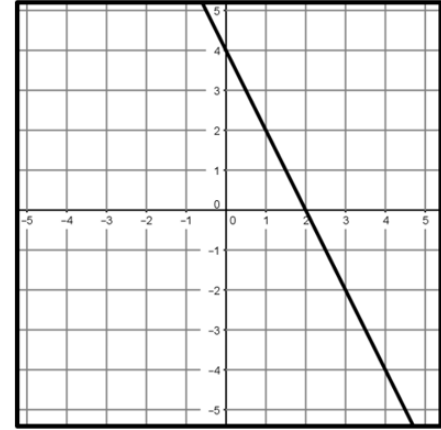
- A. y-intercept
- B. x-intercept
- C. vertex
- D. negative slope

1)



Which term does not belong with the picture above?

- A. x-intercept
- B. $y = 1$
- C. $f(1) = 0$
- D. $x = 1$



2) (2, 0) is...

- A. not included in the function.
- B. the x-intercept.
- C. the slope.
- D. the y-intercept.

Vocabulary

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Intervention

Resource

ESL

They're everywhere!

Parents

Dyslexia

PALS

Sub Folder

Watchdogs

Vocabulary

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Learning how to learn: for math and for life.



**Be an active
participant in
your own
rescue.**

SpiralEd Solutions

Vocabulary +
Wall Work +
Spirals =

Spiraling to Success



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