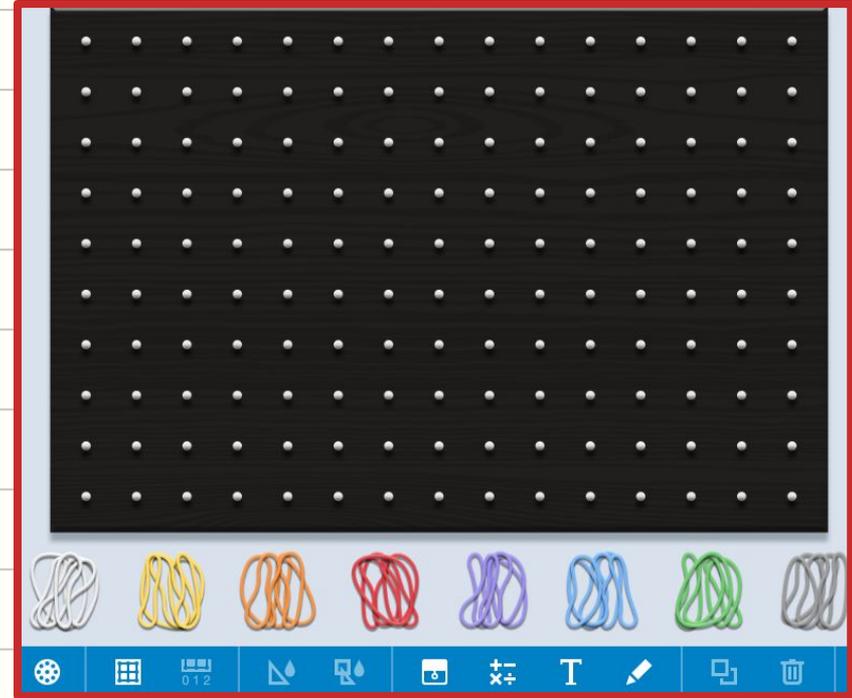


# Interactive Mathematics Using Online GeoBoard

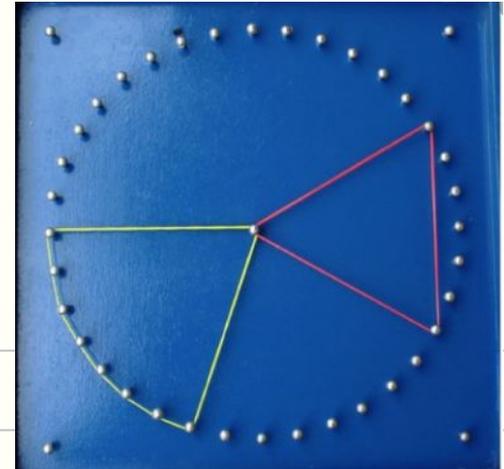
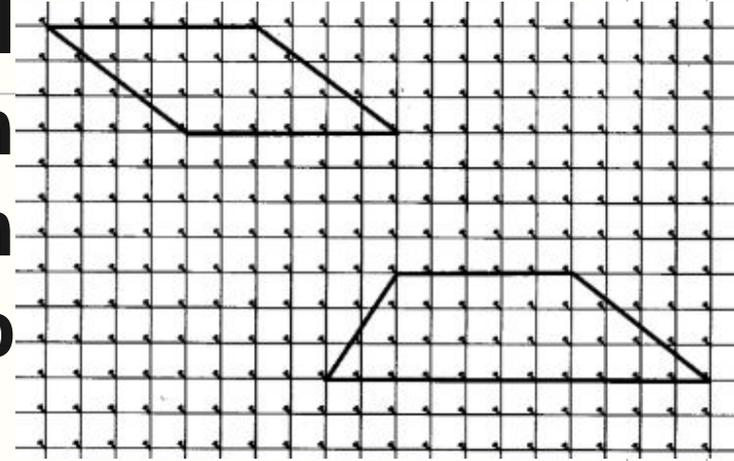
Rashmi Kathuria  
National ICT Awardee



# What is a GeoBoard?

It is a Mathematical tool which is made up of a board in which nails are half driven and we use rubber bands to create shapes using nails.

We can have a rectangular GeoBoard or a Circular GeoBoard.



# **Teaching in an Online Environment**

**How to make it effective,  
engaging, more meaningful?**

# Three components of Maths Learning

- Vocabulary
- **Concepts and Processes**
- Application

# **Teaching in an Online Environment**

## **Interactive Online GeoBoard**

# How to Begin ?

Google

online geoboard



All

Images

Videos

News

More

Settings

About 3,35,000 results (0.57 seconds)

<https://apps.mathlearningcenter.org> > geoboard ▾

**Geoboard by The Math Learning Center**

App available. For best results on an Apple iPad, use the free app. Click here to view it in the App Store: **Geoboard**, by MLC. OK. Clear all drawing? Cancel



# How to begin?

Visit the Direct link

<https://www.mathlearningcenter.org/apps>



The MATH LEARNING CENTER

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Apps

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## Free Math Apps

These apps are based on the visual models featured in [Bridges in Mathematics](#). All apps are available in two or more versions: a web app for all modern browsers, and downloadable versions for specific operating systems and devices (such as Apple iOS for iPad).

**SCROLL DOWN**

# Select GeoBoard



Open Web App

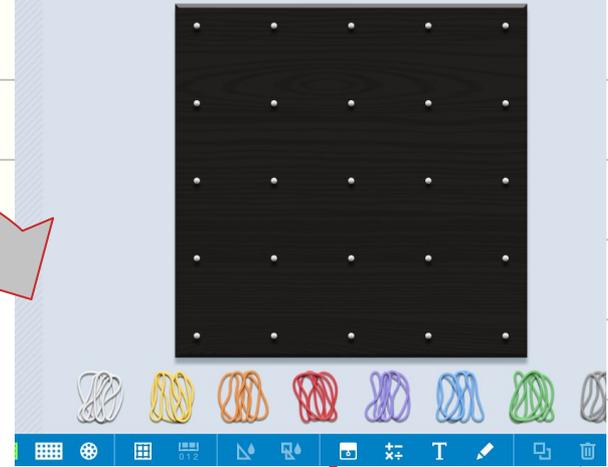
[Apple App Store](#)

[Chrome Store](#)

SUPPORTS SHARING!

## Geoboard

The Geoboard app is a tool for exploring a variety of mathematical topics introduced in the elementary and middle grades. Learners stretch bands around the pegs to form line segments and polygons and make discoveries about perimeter, area, angles, congruence, fractions, and more.



# Select GeoBoard -> Chrome Store



Open Web App  
Apple App Store  
Chrome Store

chrome web store rashmi.kathuria@khn

Home > Apps > Geoboard, by The Math Learning Center

 **Geoboard, by The Math Learning Center** [Add to Chrome](#)

Offered by: <https://www.mathlearningcenter.org>

★★★★★ 24 | [Extensions](#) |  500,000+ users

 Runs offline

[Overview](#) | [Reviews](#) | [Support](#) | [Related](#)



# How to begin?

Visit the Direct link

<https://apps.mathlearningcenter.org/geoboard/>

# Tool Bar

## Toolbar Interface

Icon	Tool	Shortcut	Description
	Start Over	Esc	Clear the workspace or reload the Share Code.
	Board Shape	1, 2, 3	Choose square, large rectangle, or circle board.
	Grid	G	Show grid lines on boards.
	Grid Numbers	N	Show numbers along x- and y- axes.
	Fill Tool	F	Fill or unfill selected bands.
	Fill All Tool	A	Fill or unfill all bands on the board.

# Tool Bar

	<b>Cover Tool</b>	H	Add a resizable cover to hide or show frames and counters.
	<b>Math Text Tool</b>	E	Open a keypad for creating expressions and equations. Using the keyboard to add numbers and symbols also works. <i>Tip: Double-tap your text to edit it.</i>
	<b>Writing Tool</b>	T	Enter text using your keyboard. <i>Tip: Double-tap your text to edit it.</i>
	<b>Drawing Tools</b>	W	Open or hide the drawing tools.
	<b>Duplicate</b>	D	Duplicate selected items.
	<b>Trash</b>	backspace, delete	Delete selected items.
	<b>Share Code</b>	K	Open shared work using a code.
	<b>Share</b>	S	Share your work with an image, a link, or a code.
	<b>Info</b>	I	View how-to and other information about this app.

# What We can Explore?

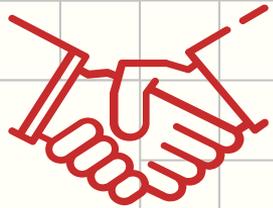
**Symmetry**      **Patterns**

**Fractions**

**Area and Perimeter**

**Counting**

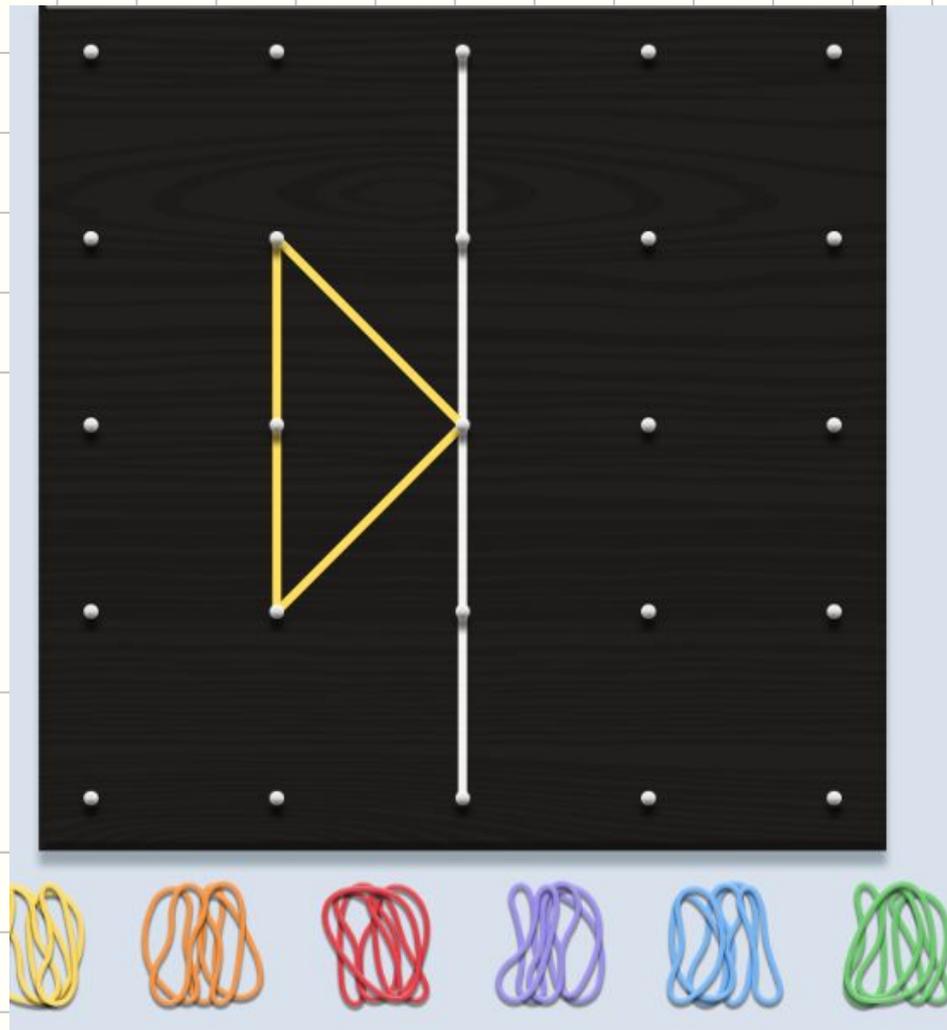
**Geometry**



**Art and Mathematics**

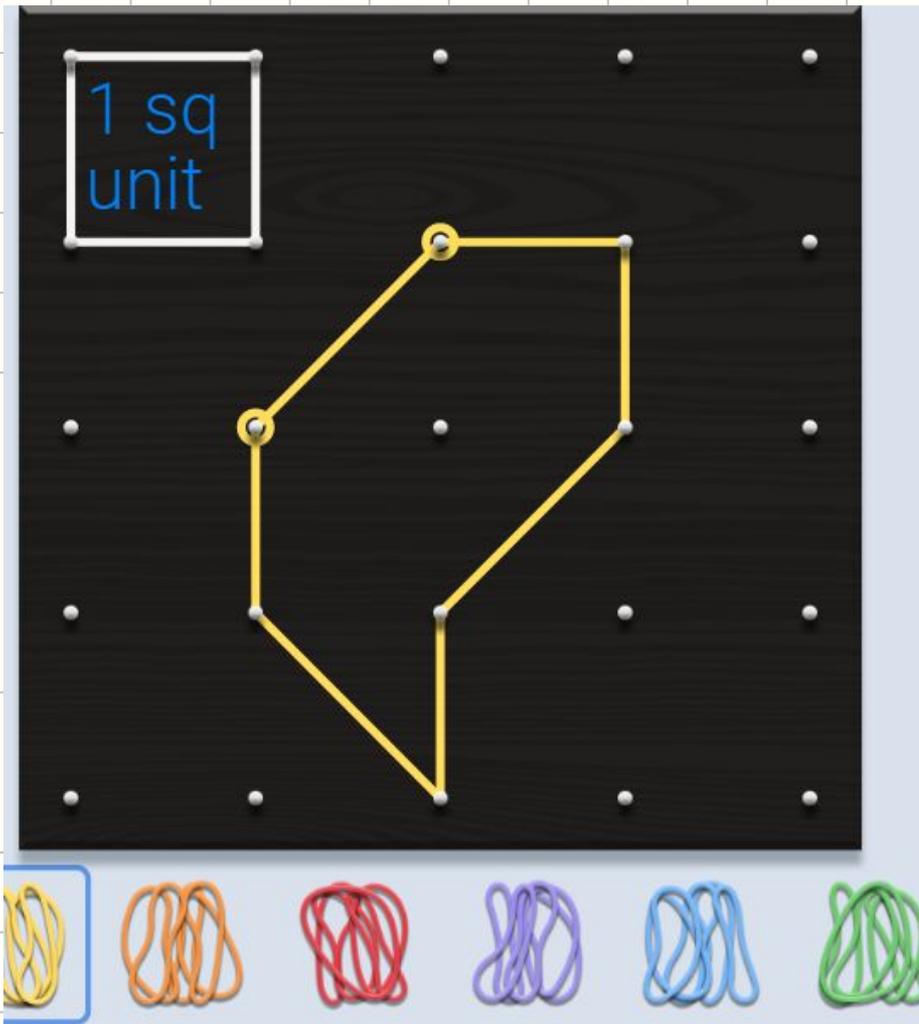
01

Symmetry



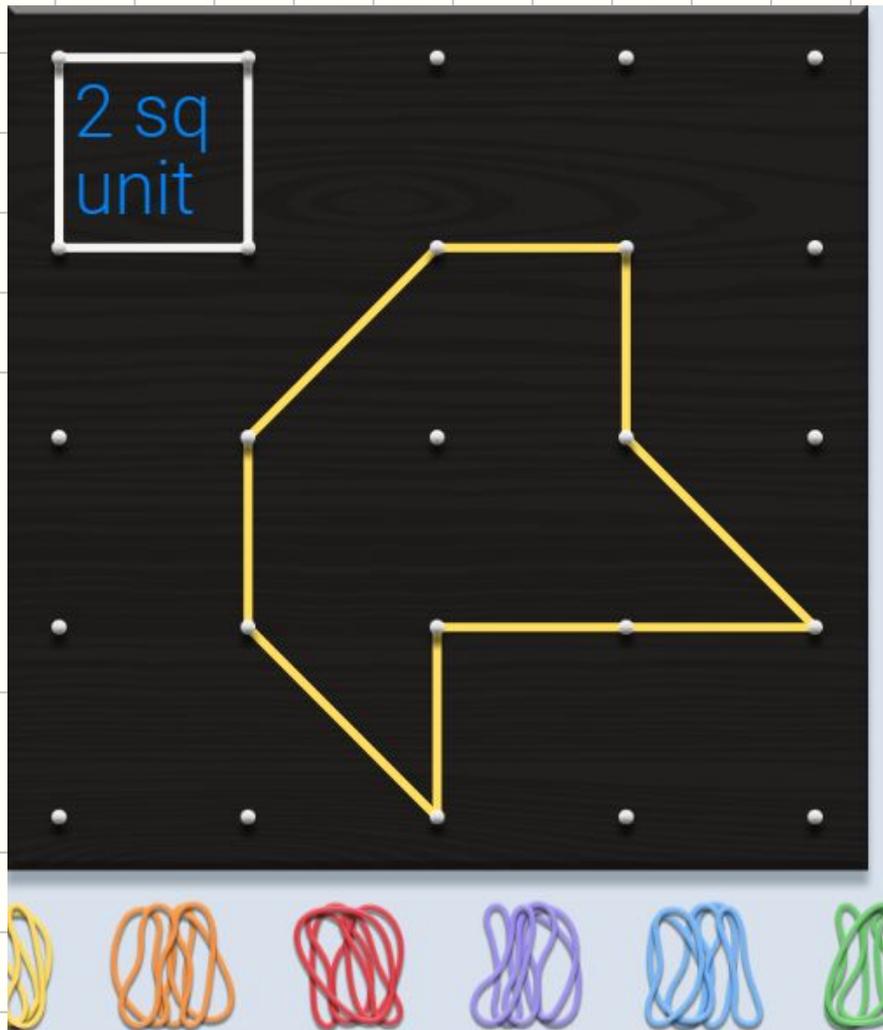
02

What is my Area?



02

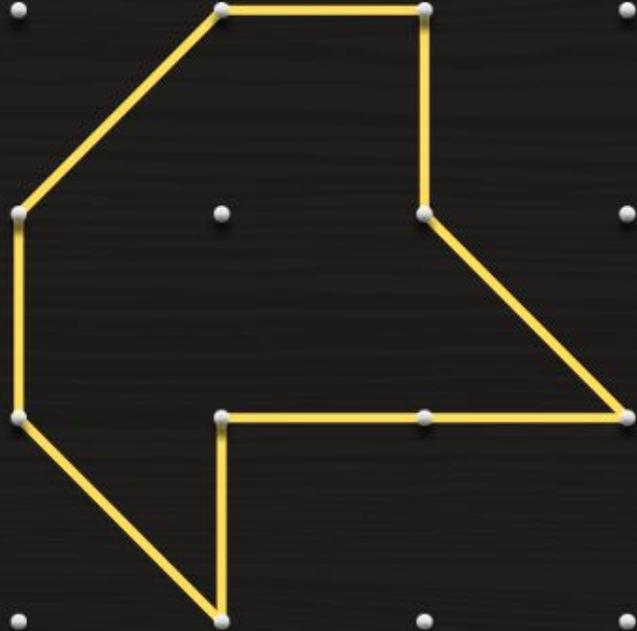
What is my Area?



03

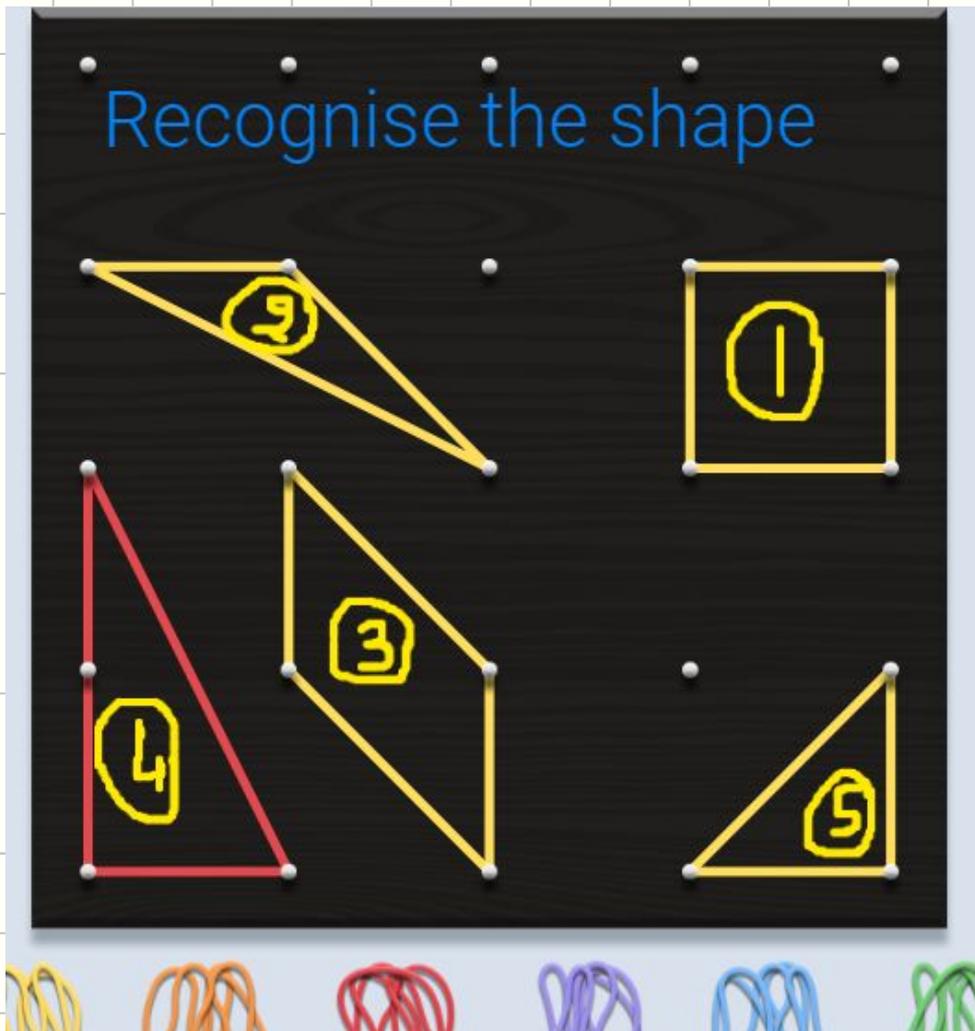
Thinking  
Question?

Convex or Concave  
Polygon?



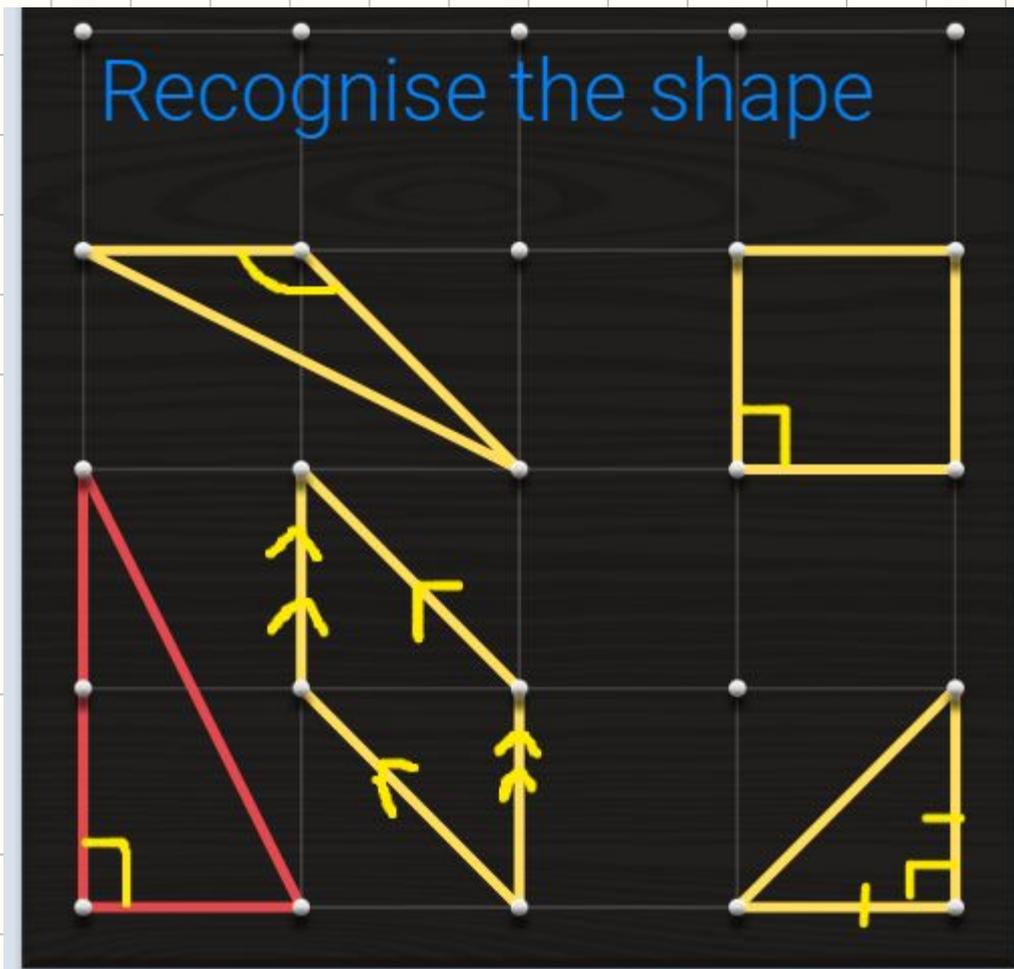
04

Recognise  
the shape



04

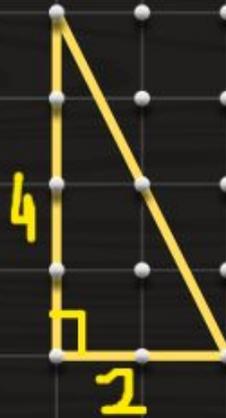
Recognise  
the shape



# 05

## Explore

Shapes having same area  
but different perimeter.



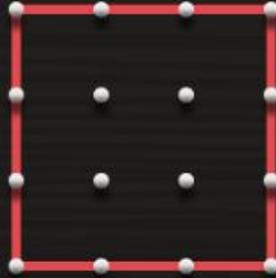
$$A = \frac{1}{2} \times 2 \times 4$$
$$= 4 \text{ sq/Units}$$



# 06

## verification

• area of square  
= side  $\times$  side  
=  $3 \times 3 = 9$  sq units



• Perimeter of sq  
=  $4 \times$  side =  $4 \times 3$   
= 12 units

Area of rectangle  
= length  $\times$   
breadth =  
 $9 \times 1 = 9$  sq  
units

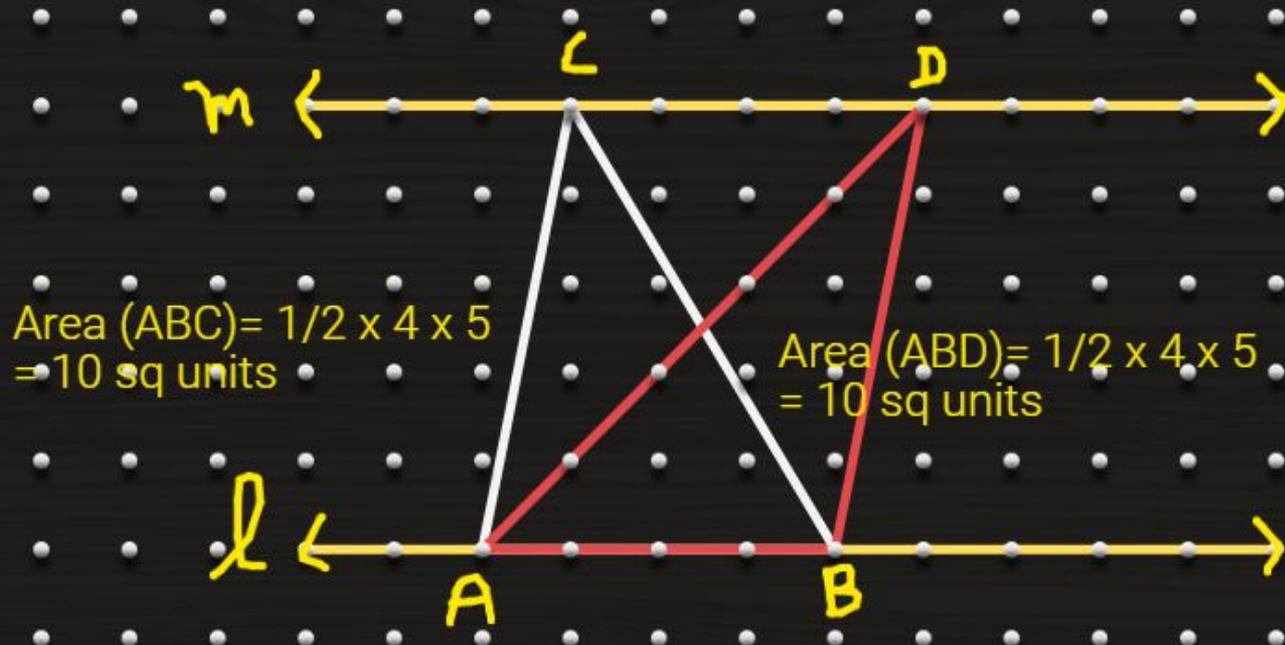


perimeter of  
rectangle =  
 $2(l+b)$   
=  $2(9+1) = 20$   
units

# 06

## verification

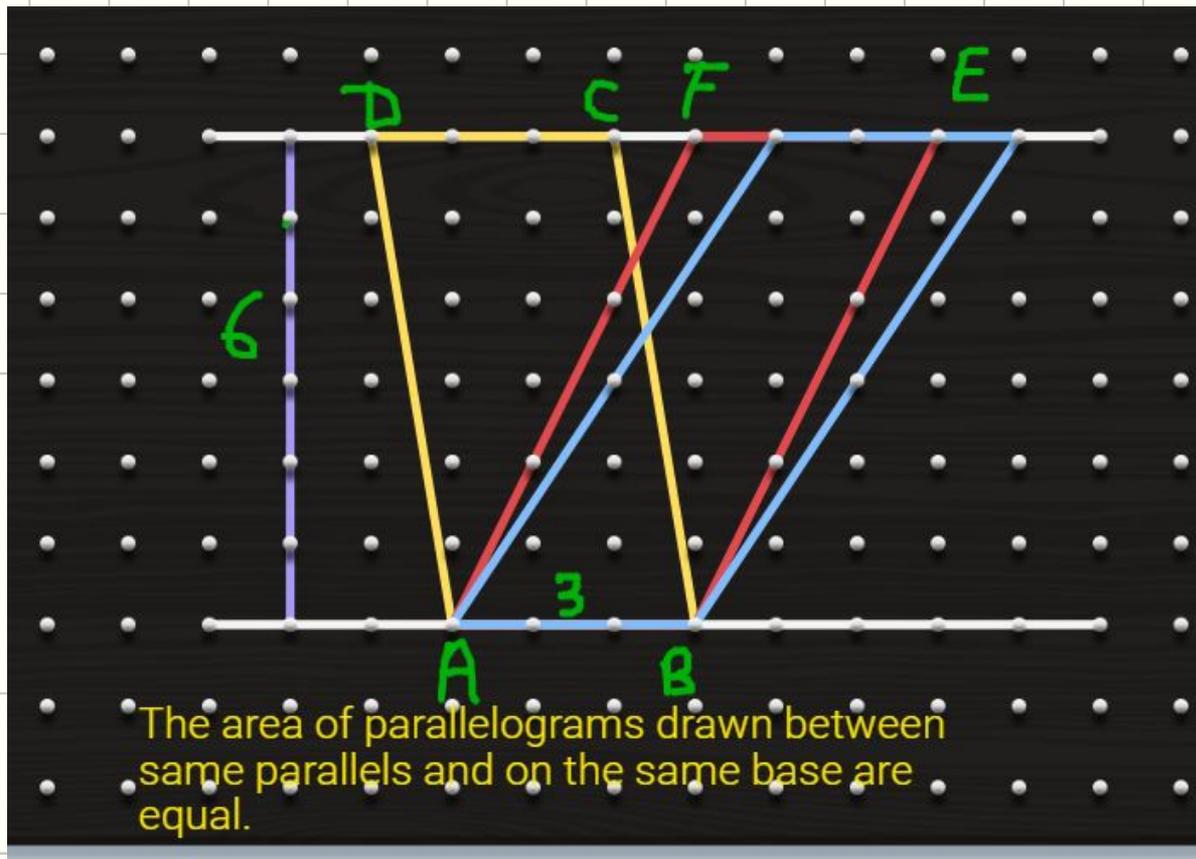
Triangles on the same base and between same parallels are equal in areas.



<https://apps.mathlearningcenter.org/geoboard/?3bh3ddqv>

# 06

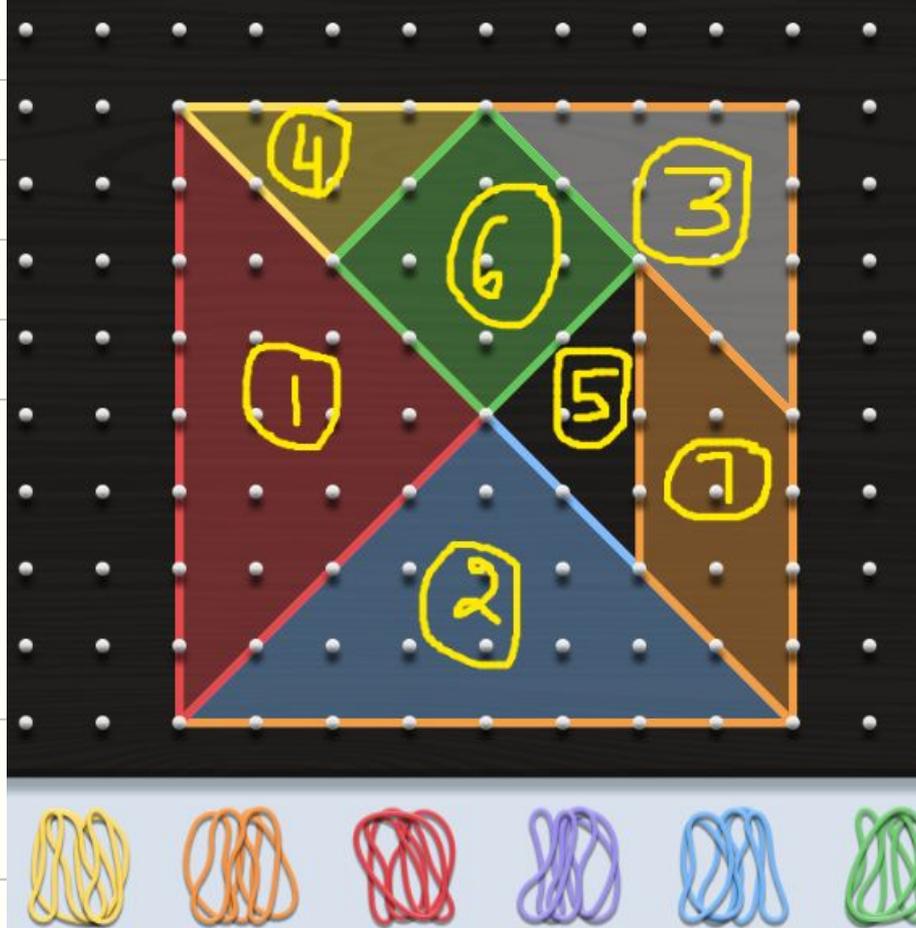
## verification



<https://apps.mathlearningcenter.org/geoboard/?1wzygt5g>

07

# Recreation

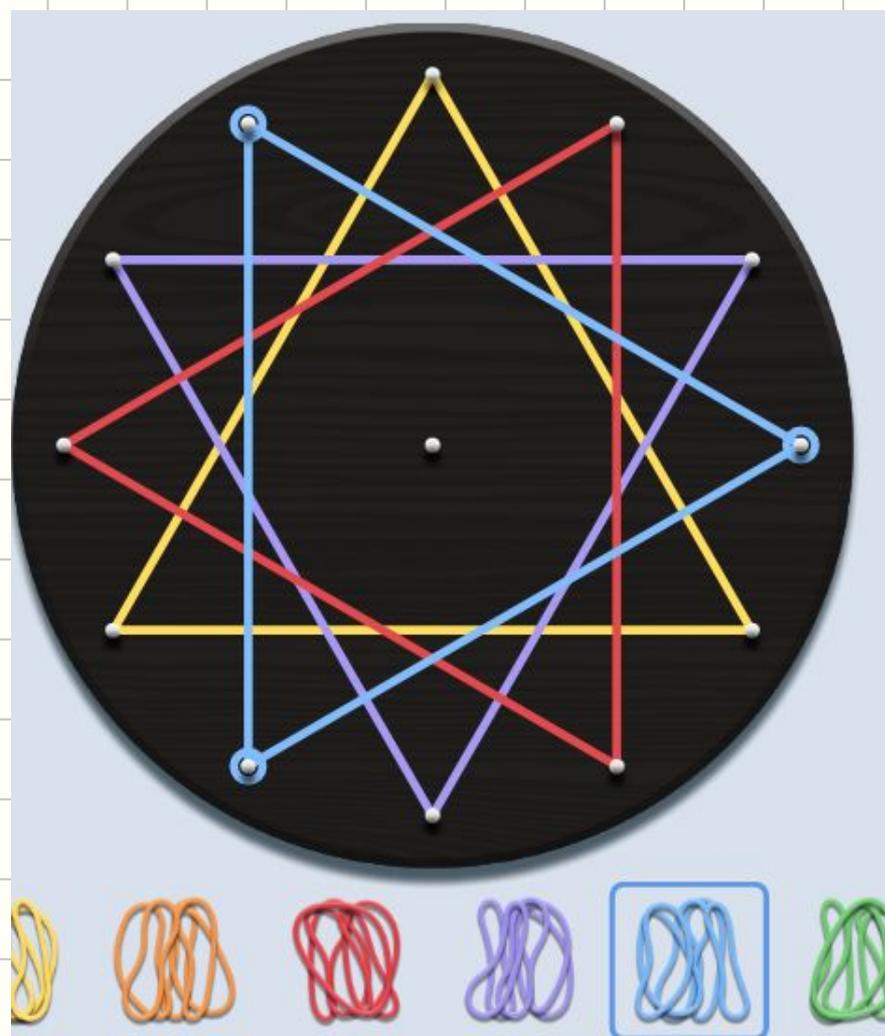


<https://apps.mathlearningcenter.org/geoboard/?3xv7jdk>

# 07

## Recreation

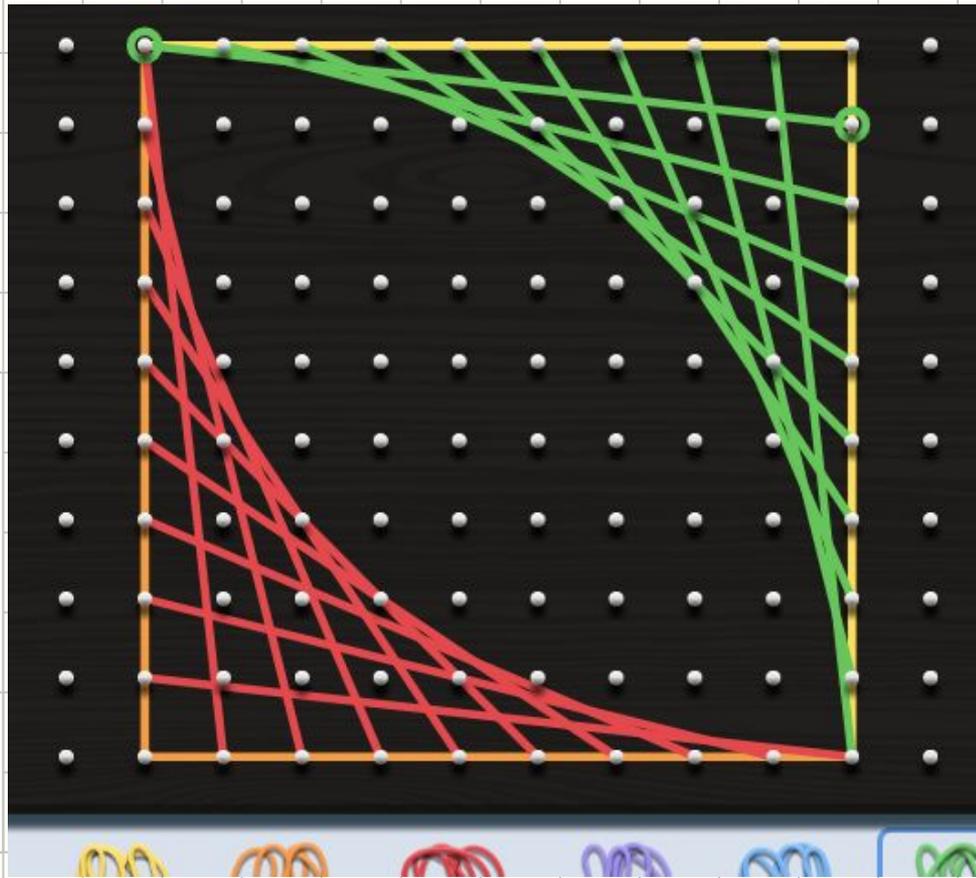
<https://apps.mathlearningcenter.org/geoboard/?169ep06x>



# 07

## Recreation

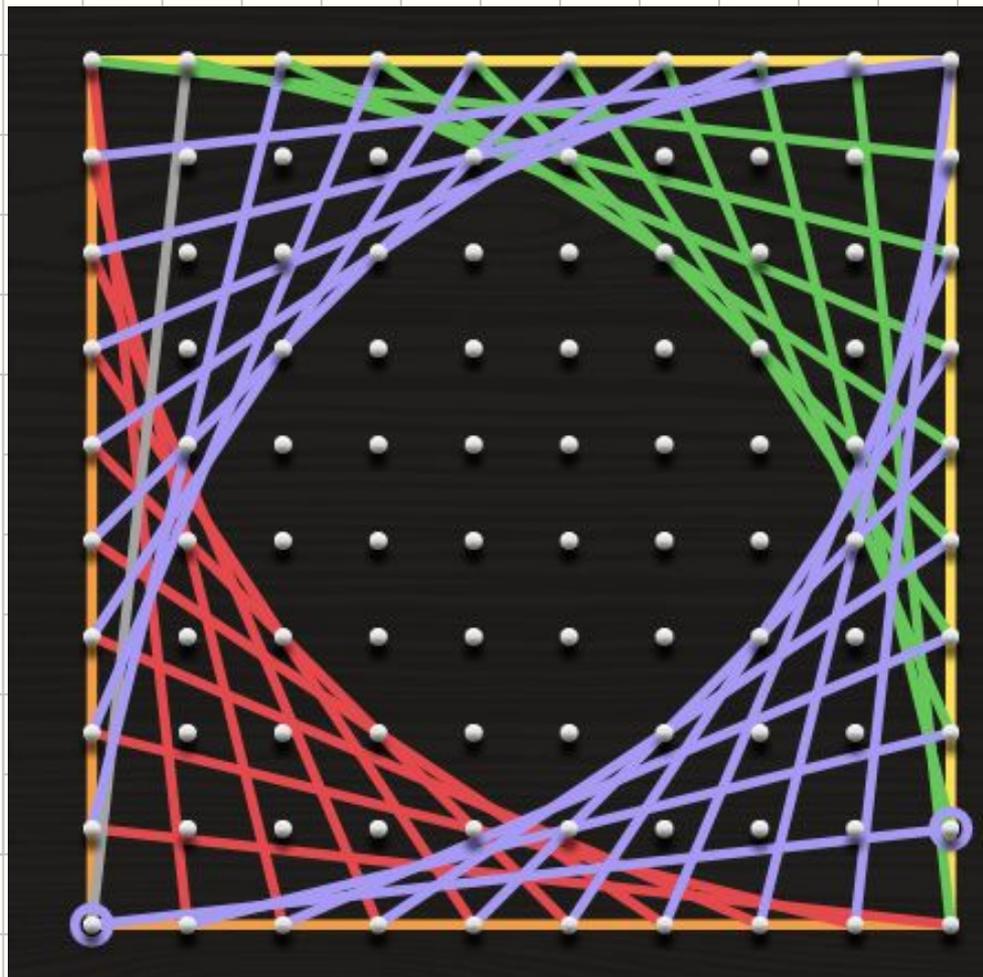
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# 07

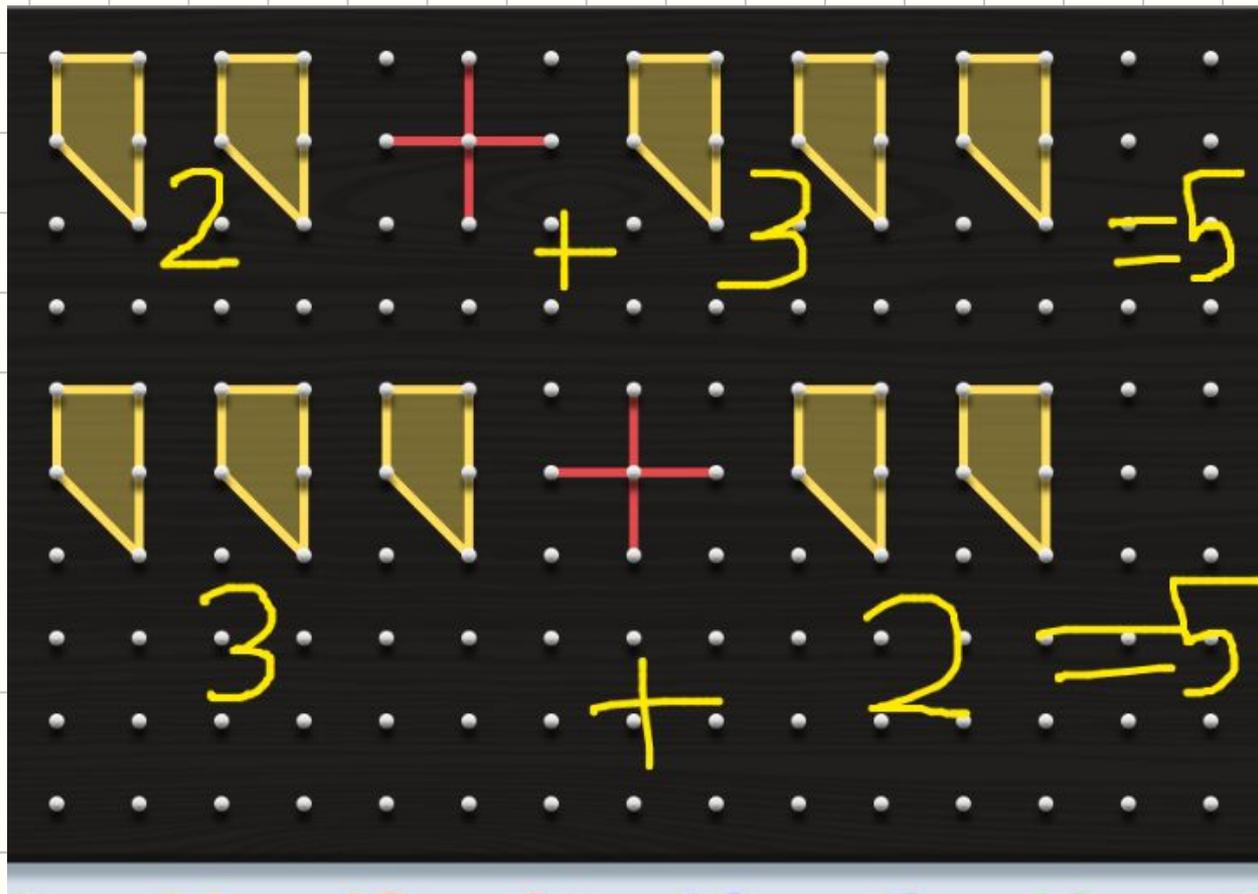
## Recreation

<https://apps.mathlearningcenter.org/geoboard/?23fllymd>



08

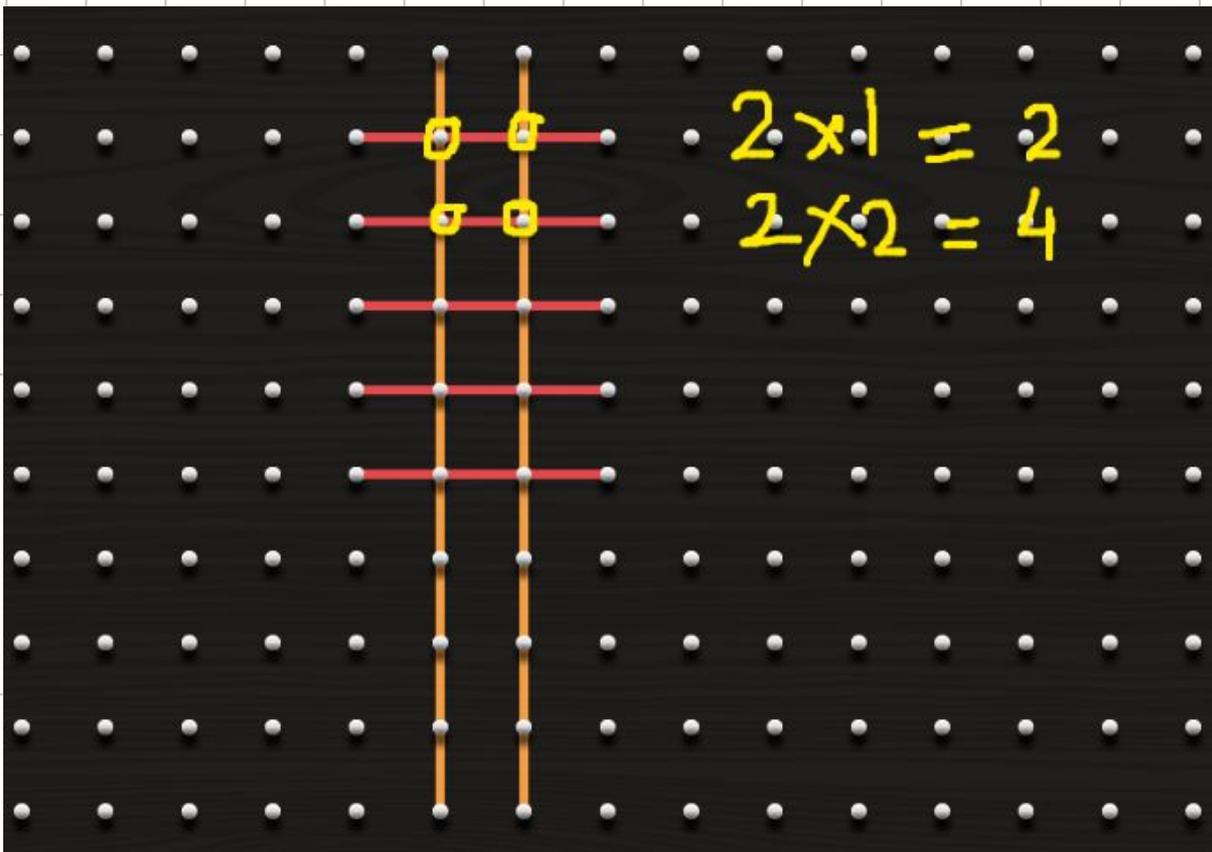
Math  
Concepts



<https://apps.mathlearningcenter.org/geoboard/?1aylf3zd>

# 08

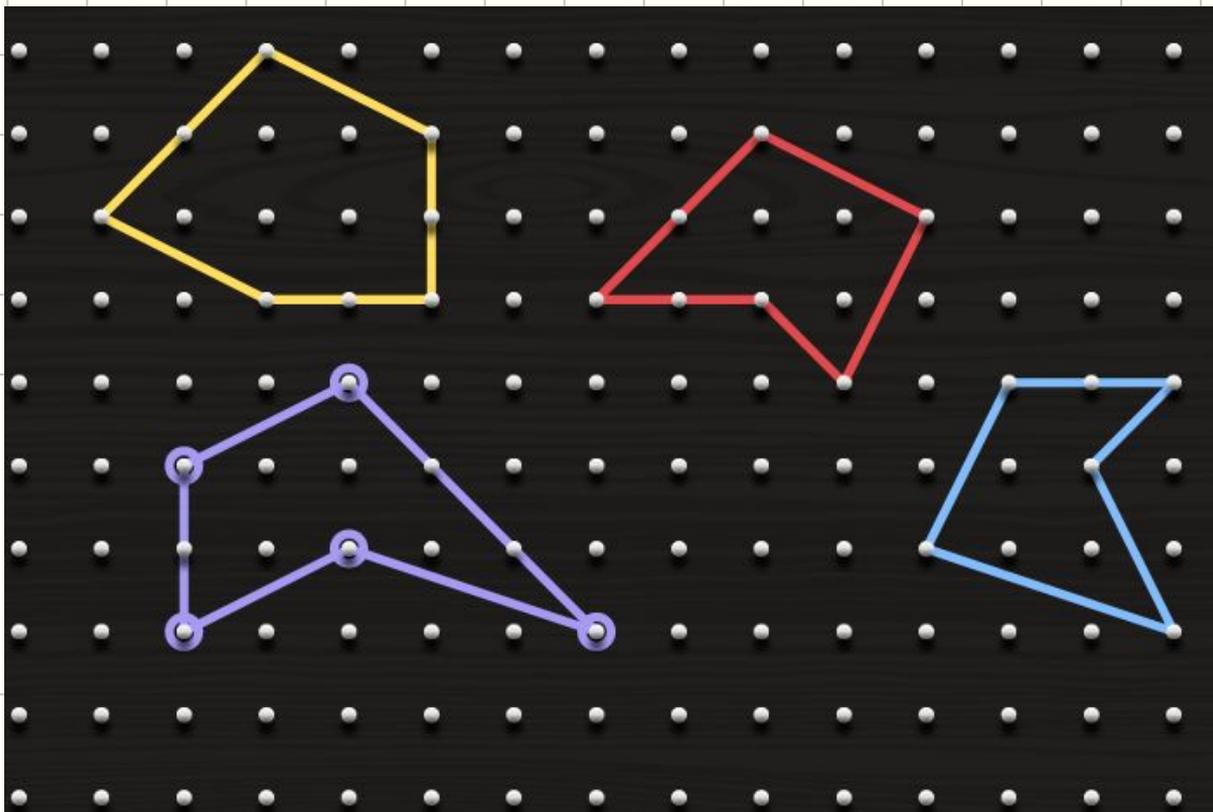
## Math Concepts



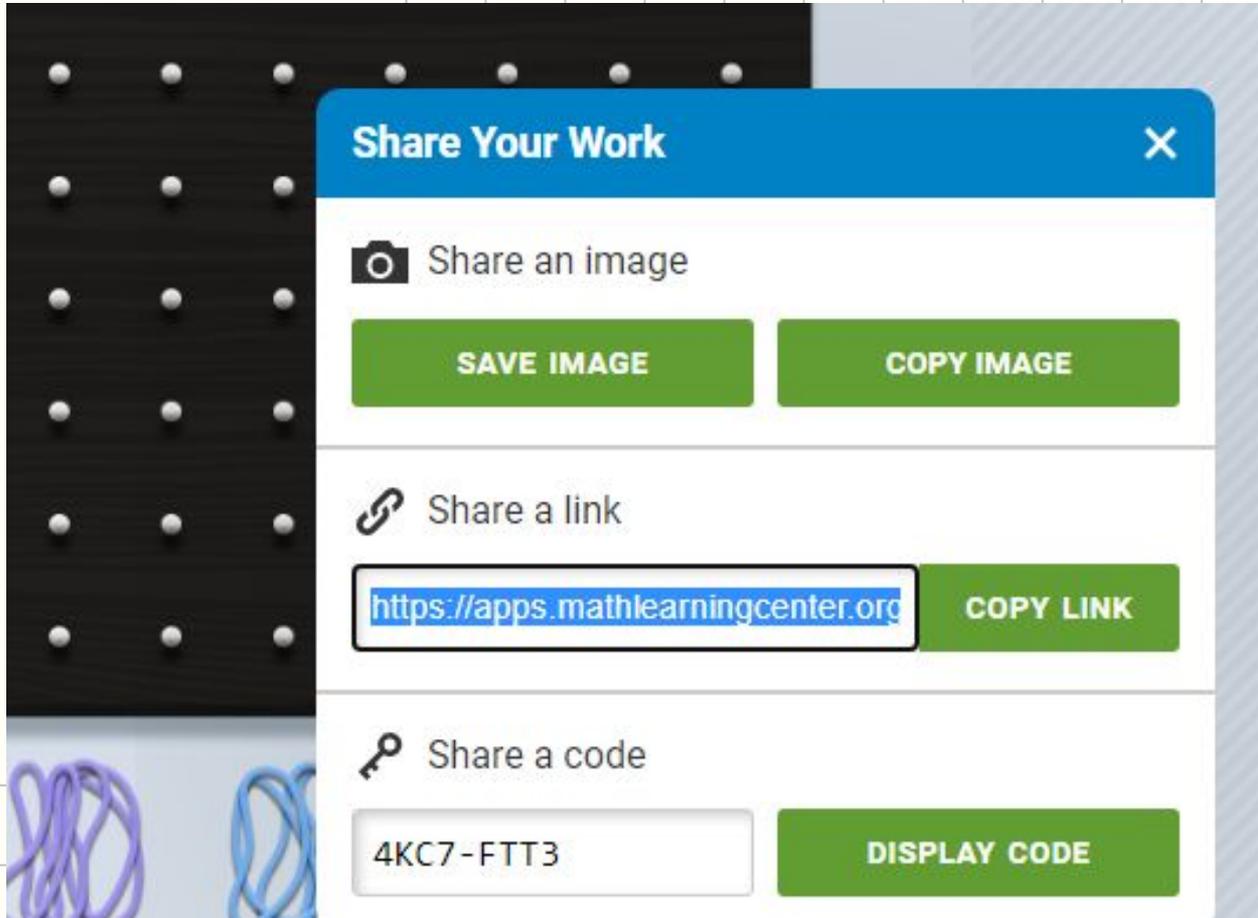
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08

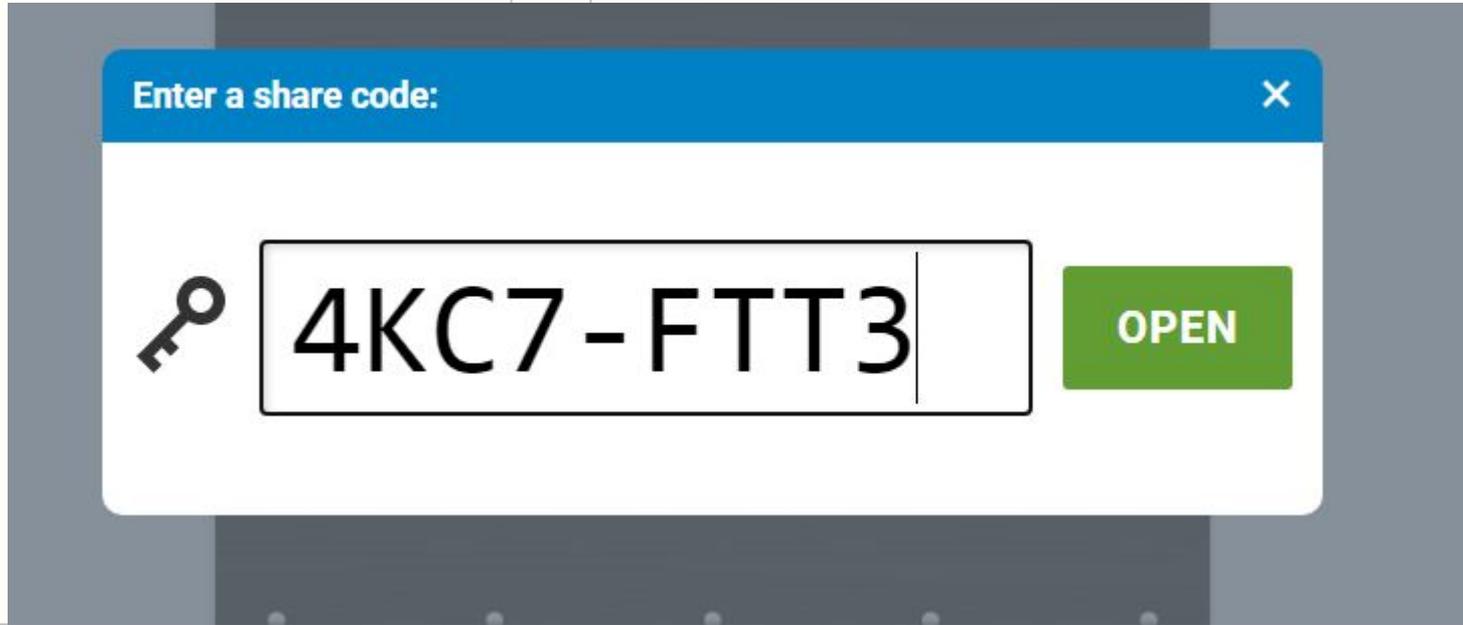
**Math  
Concepts**



# Sharing the work? Three ways



# Opening Shared work via code?



**“Mathematics is a beautiful subject.”**



**Let us take a look at the tool live...**

<https://apps.mathlearningcenter.org/geoboard/>



**Thank You!**

