Translations

Translations

Translations

Translations

Translations

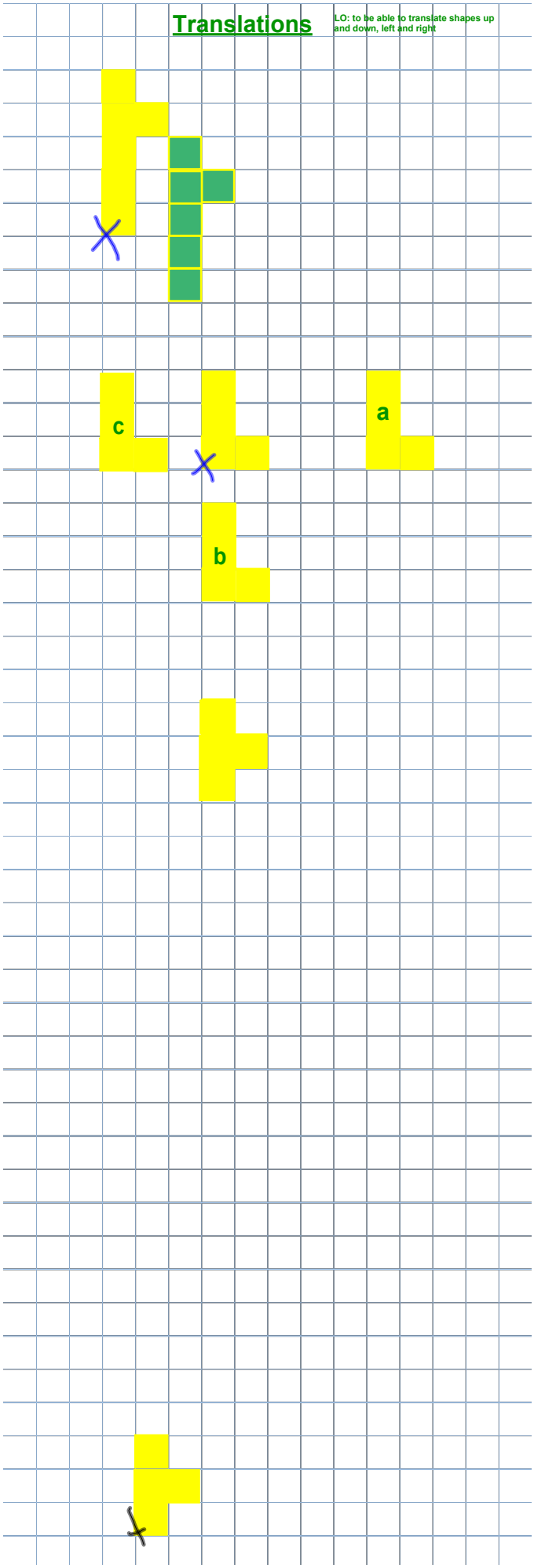
Translations

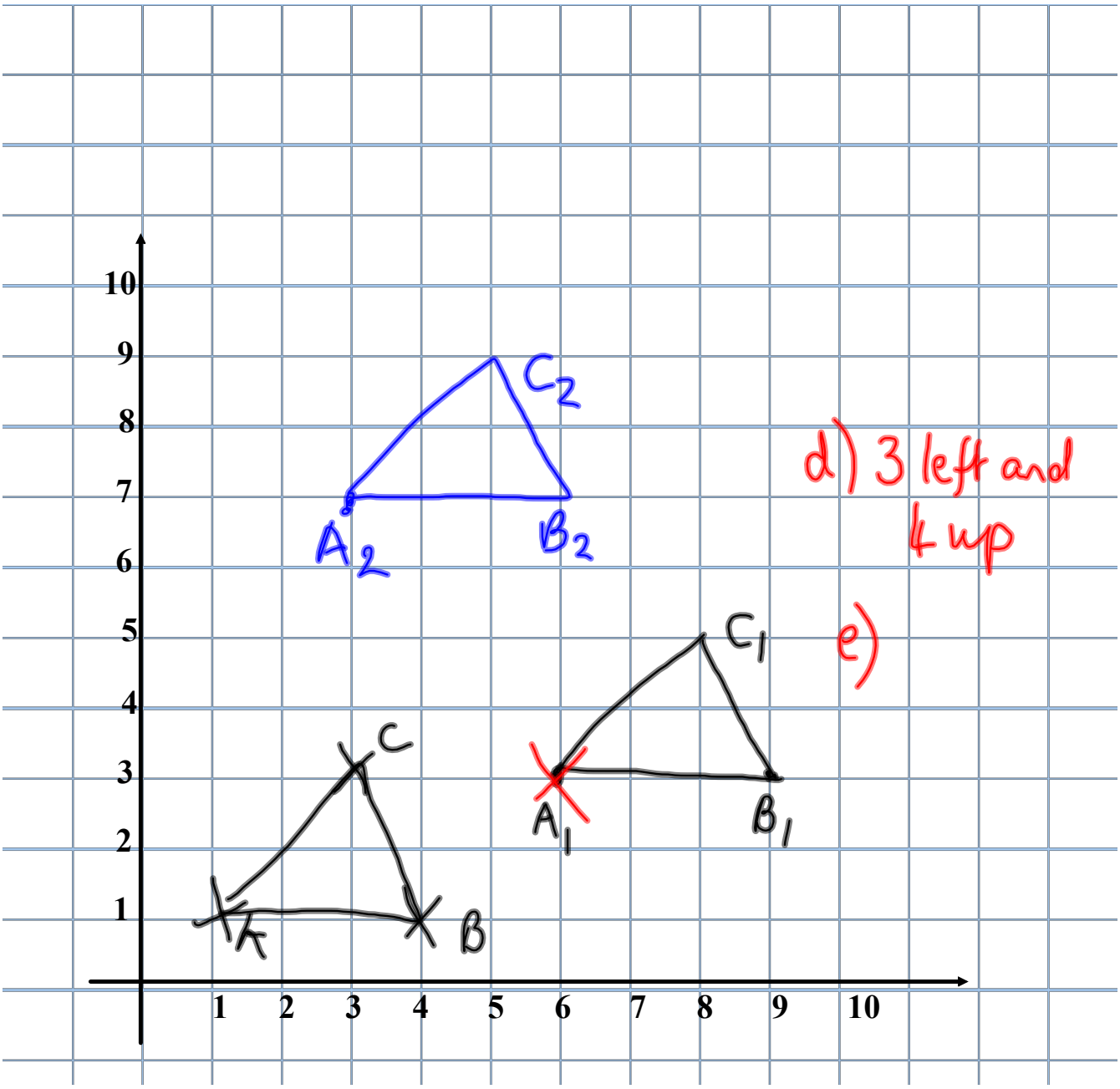
Translations

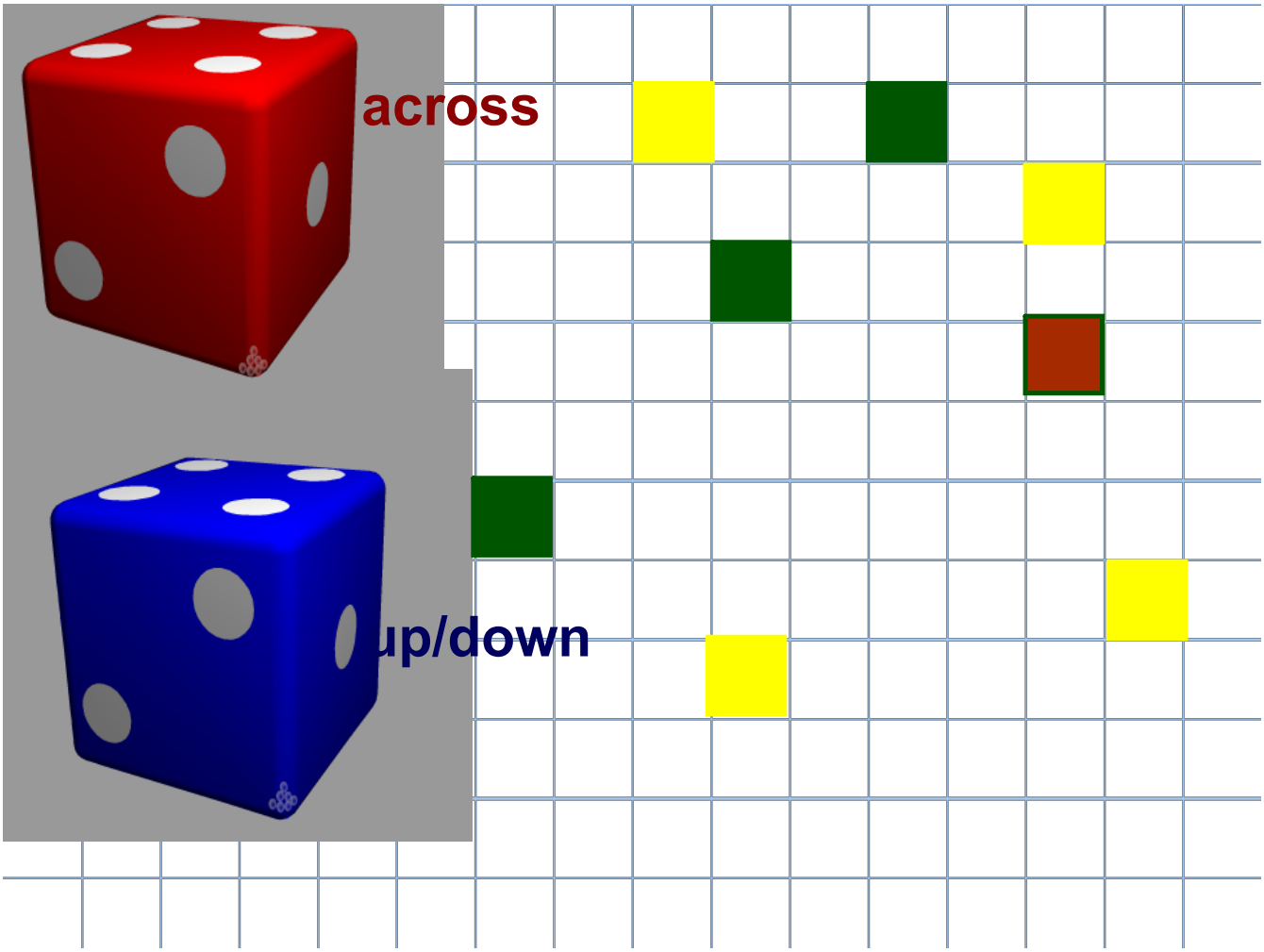
Translations are slides!

Translations

LO: to be able to translate shapes up and down, left and right



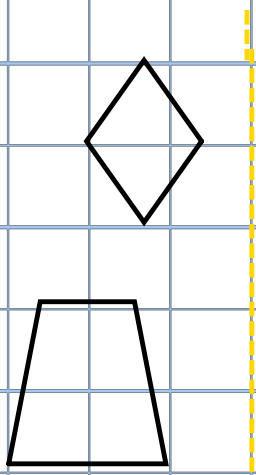

10
9
8
7
6
5
4
3
2
1
1
2
3
4
5
6
7
8
9
10
C2
A2
B2
d) 3 left and 4 up
e)
C1
A1
B1
C
A
B

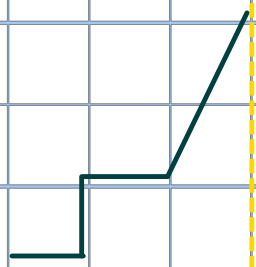

across
up/down

If you can read this don't say anything!
Turn to the back of your book and write out the 4 times tables.

LO: to be able to reflect shapes in a horizontal, vertical and diagonal lines using tracing paper

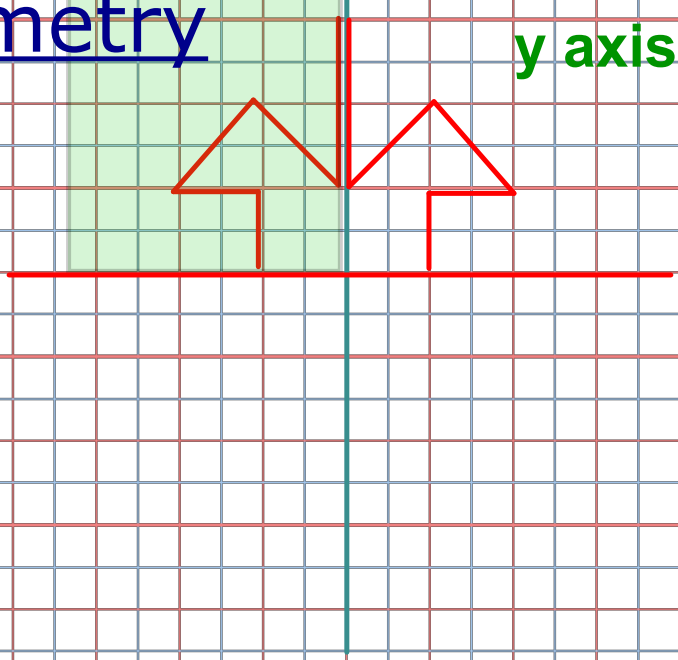
Reflection





Reflectional symmetry

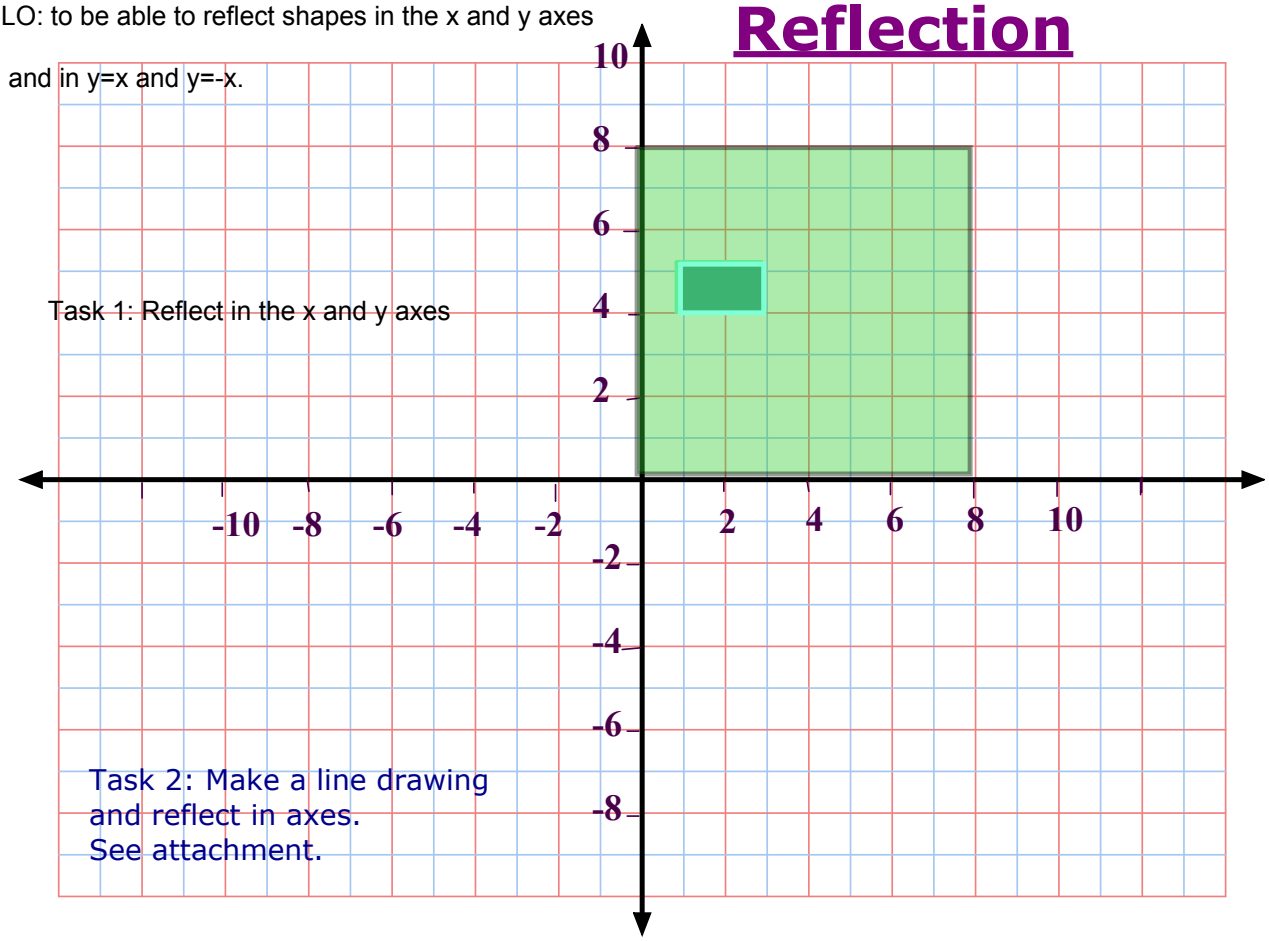
Reflection in the y axis



LO: To be able to reflect shapes in all 4 quadrants

Reflection

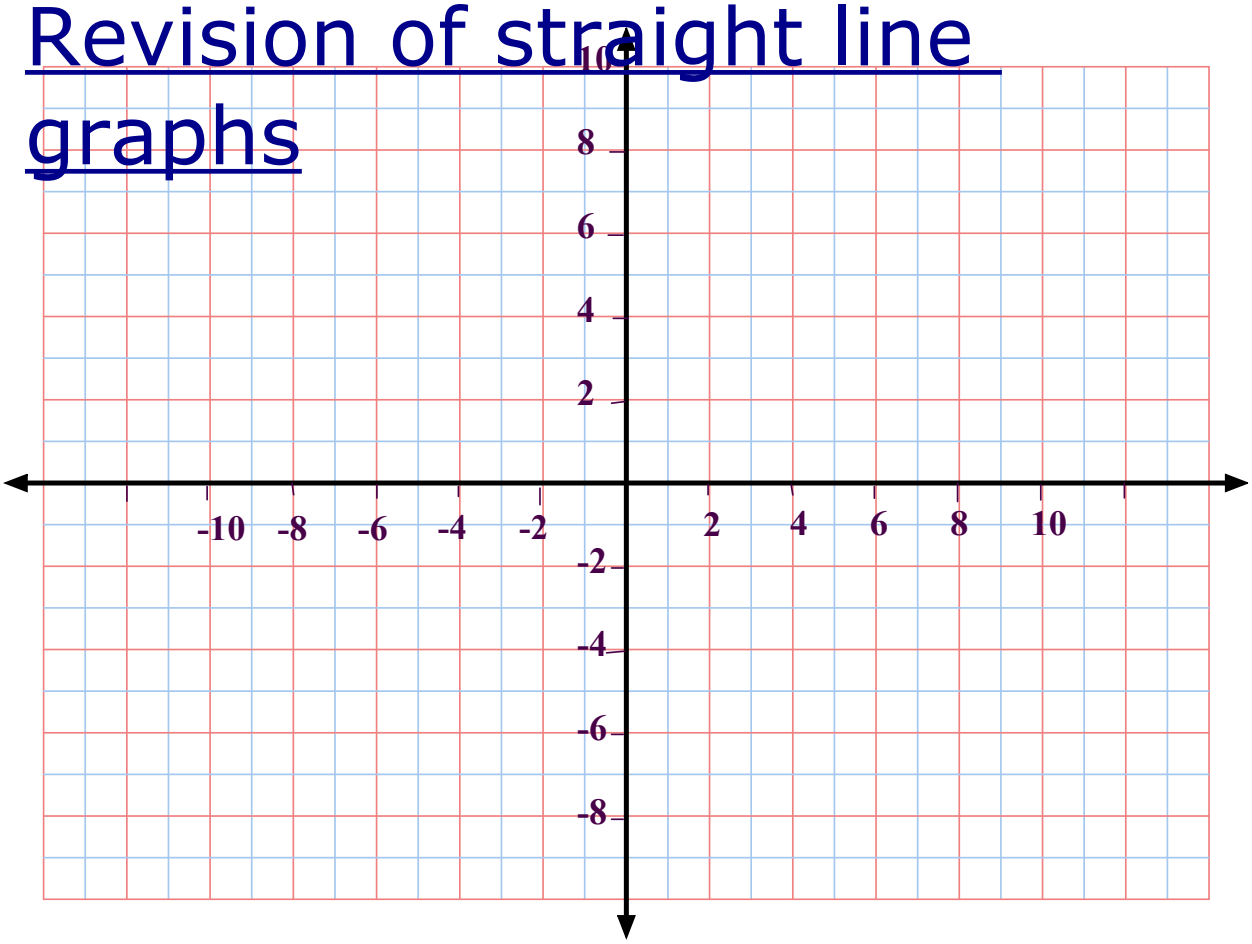
LO: to be able to reflect shapes in the x and y axes and in y=x and y=-x.



Task 1: Reflect in the x and y axes

Task 2: Make a line drawing and reflect in axes.
See attachment.

Revision of straight line graphs



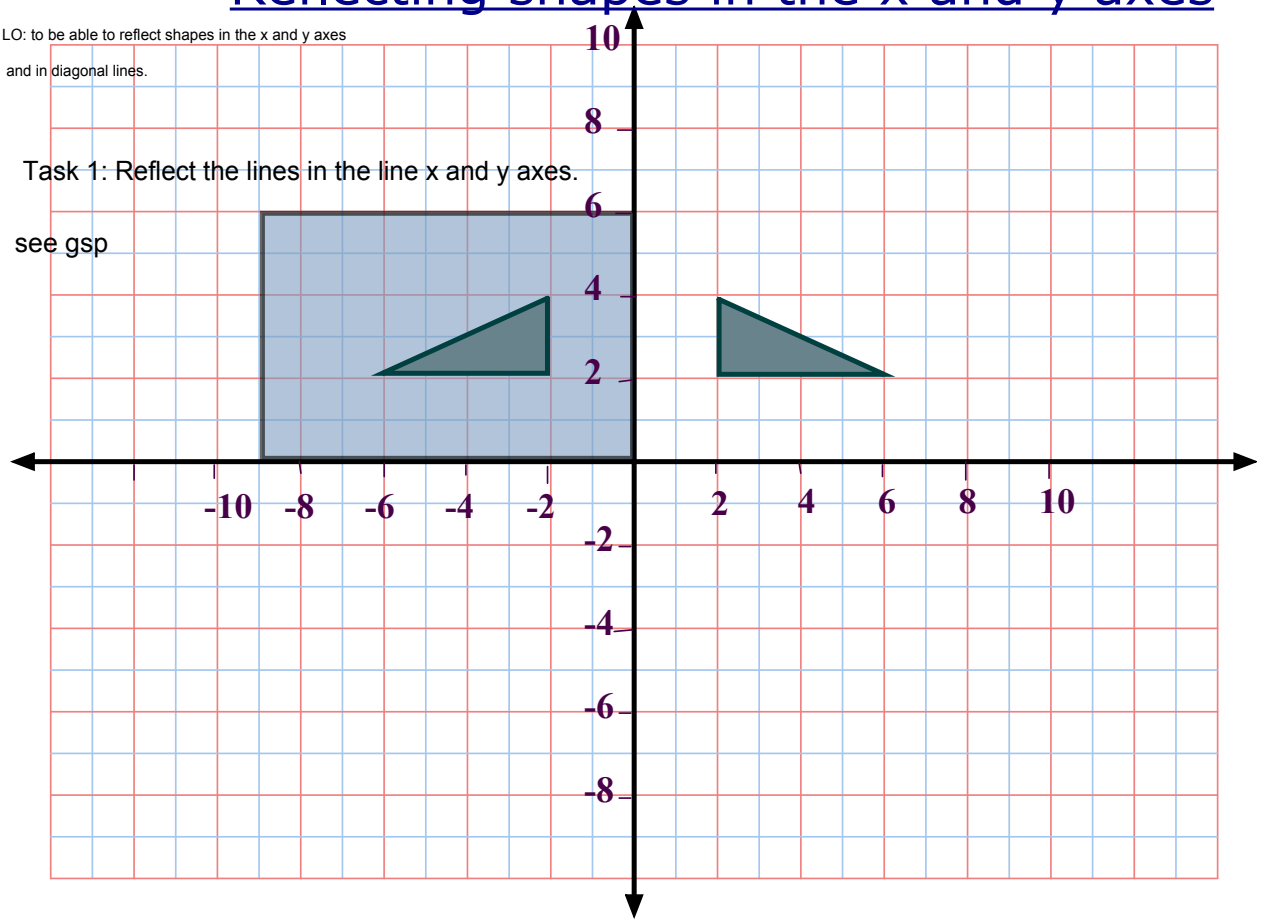
Reflecting shapes in the x and y axes

LO: to be able to reflect shapes in the x and y axes

and in diagonal lines.

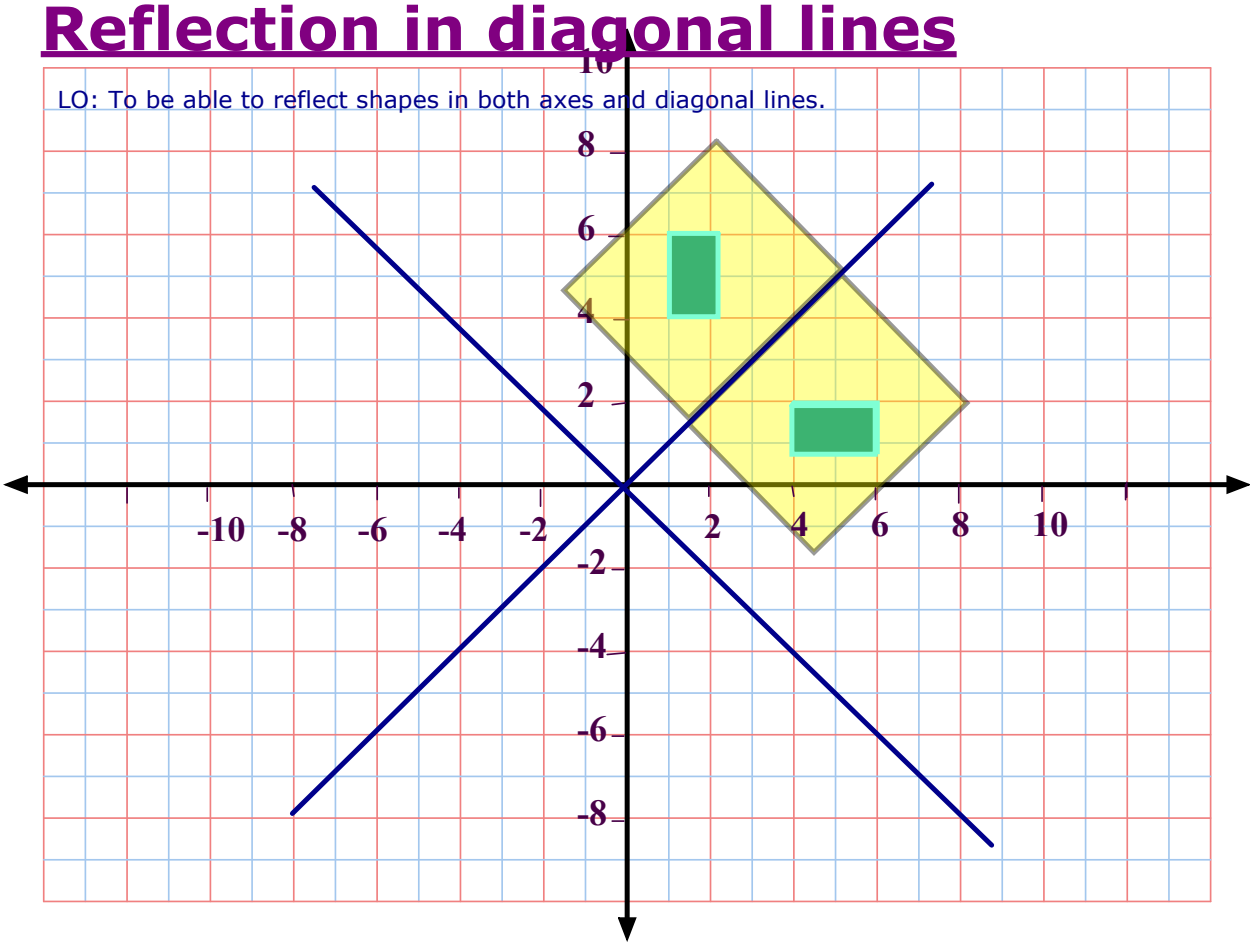
Task 1: Reflect the lines in the line x and y axes.

see gsp



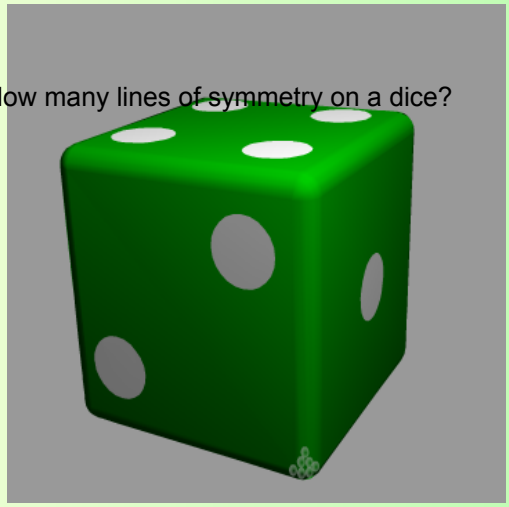
Reflection in diagonal lines

LO: To be able to reflect shapes in both axes and diagonal lines.



LO: to be able to identify lines of symmetry

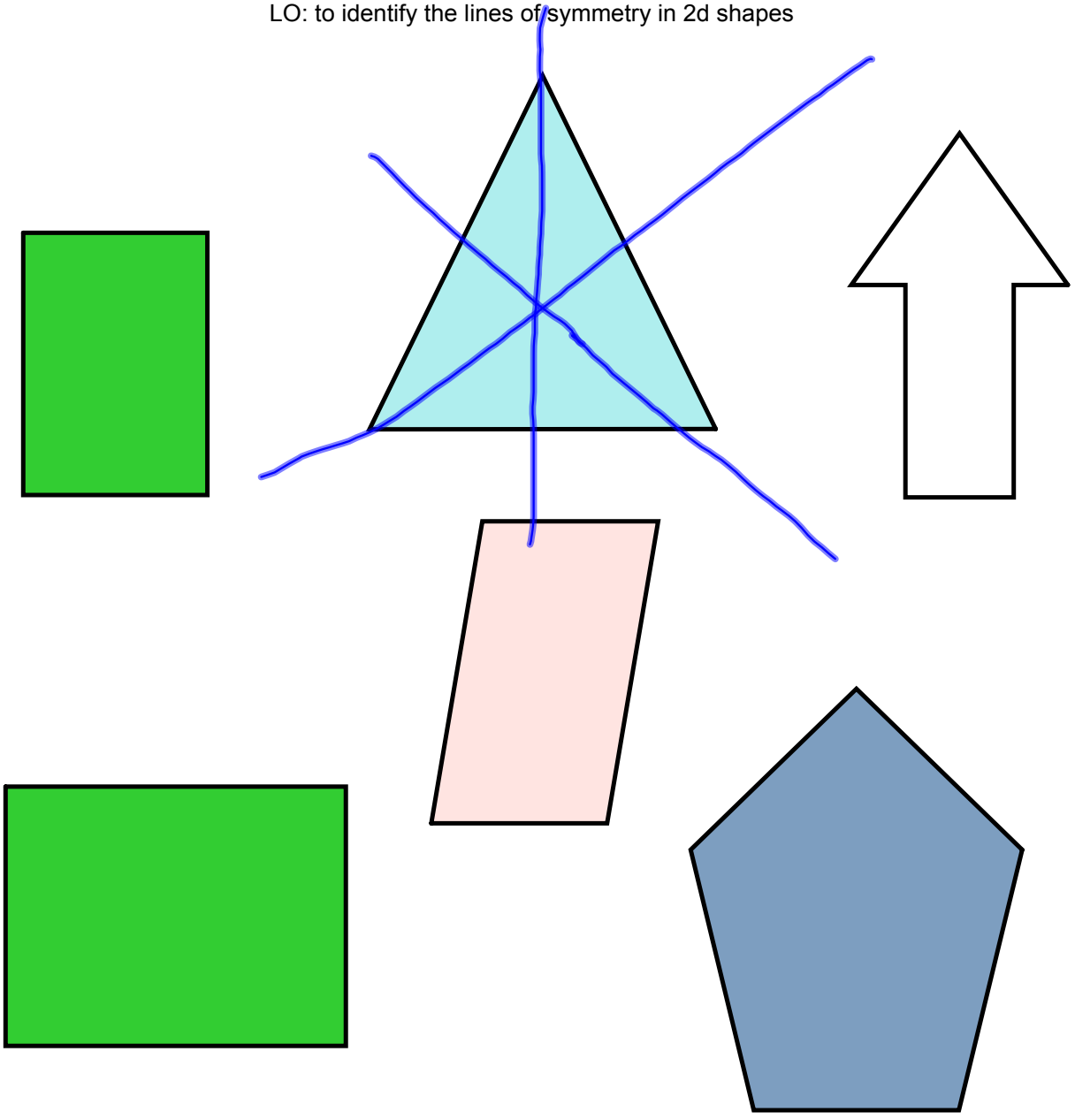
How many lines of symmetry on a dice?



Other side of worksheet.

Reflectional Symmetry

LO: to identify the lines of symmetry in 2d shapes



Use 2D geometric shapes

Hwk for Tuesday

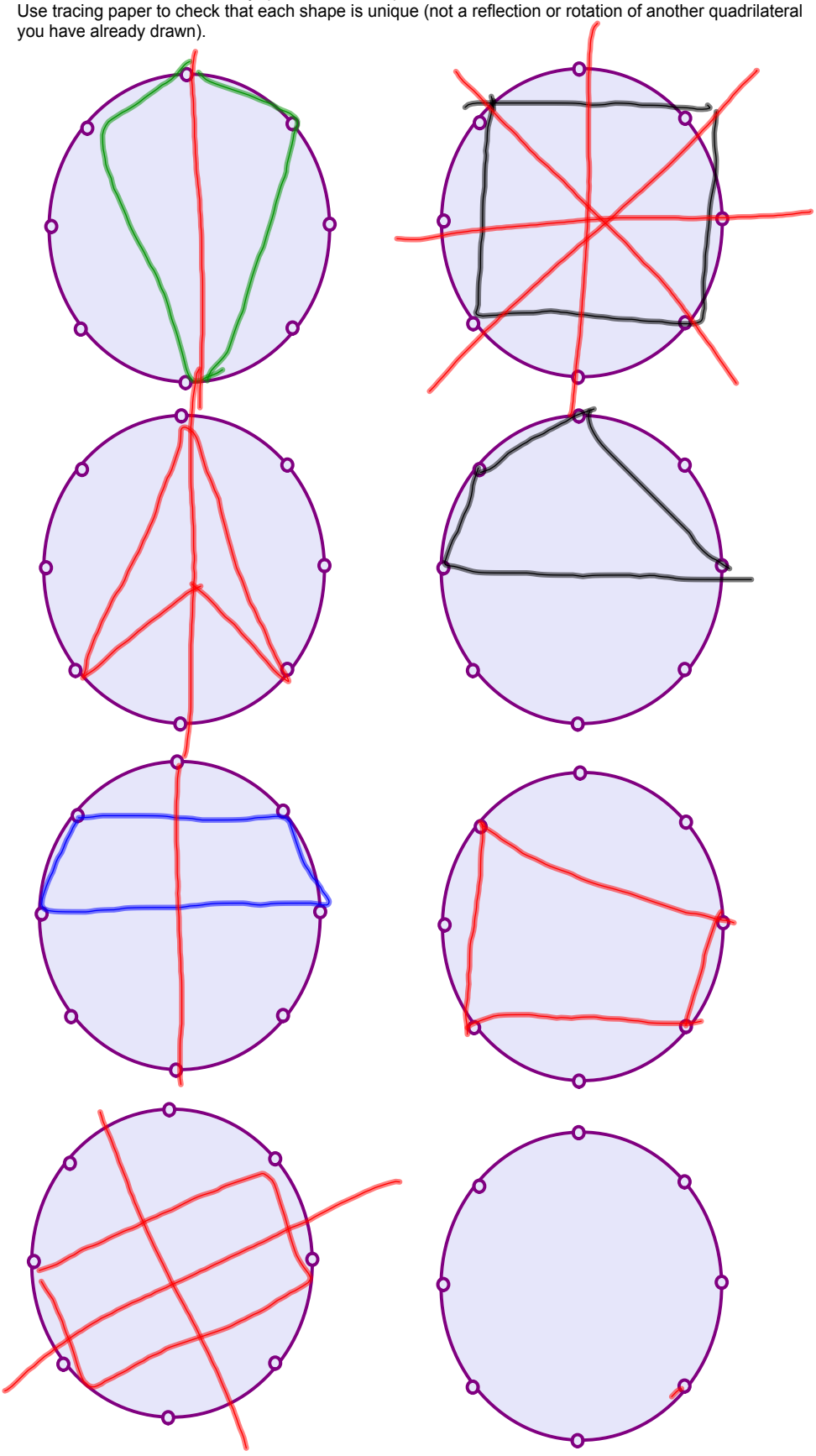
Draw a pair of axes and $y = x$ and $y = -x$ on a piece of paper.

Design a reflection pattern.

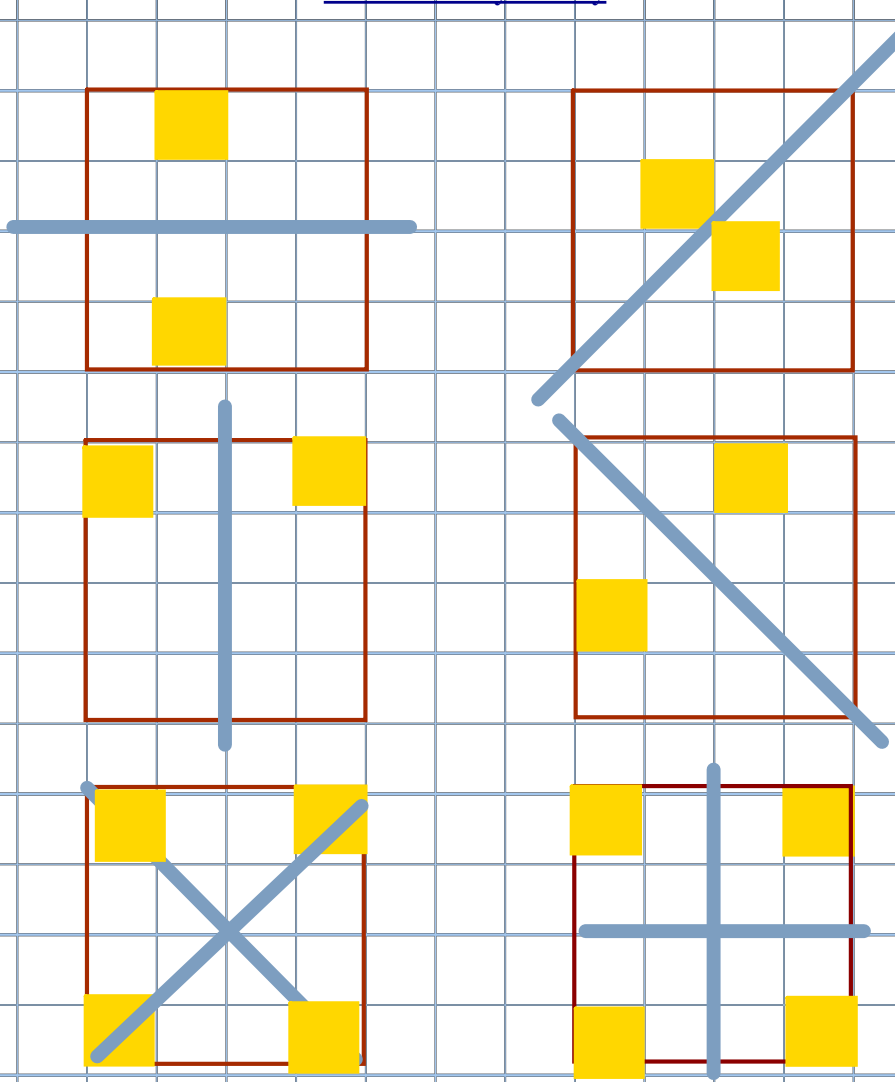
Identifying all the lines of symmetry of 2d quadrilaterals

(level5)

Join four dots to make as many quadrilaterals as possible.
Use tracing paper to check that each shape is unique (not a reflection or rotation of another quadrilateral you have already drawn).



Name each of your quadrilaterals.
Mark in all their lines of symmetry.

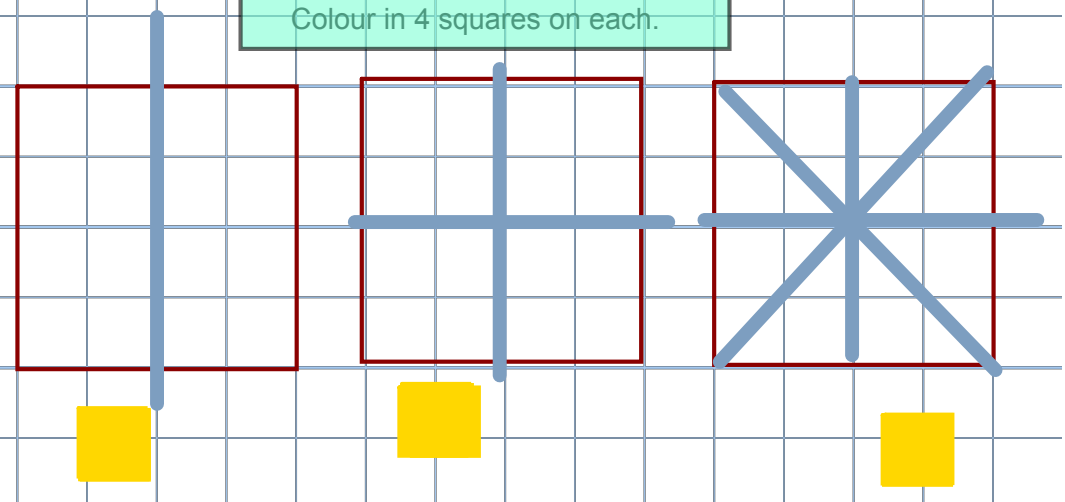


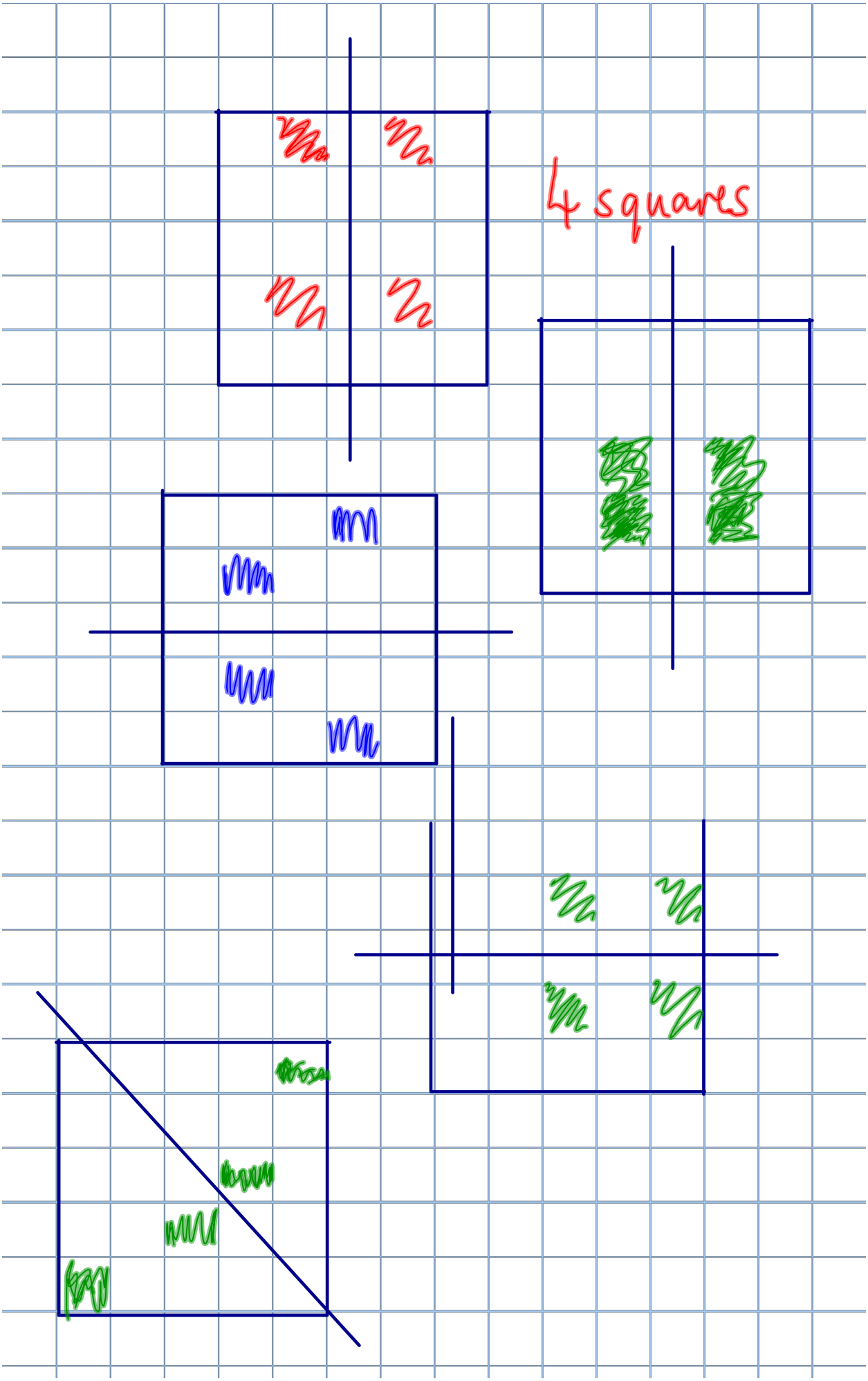
Lines of Symmetry

24th March

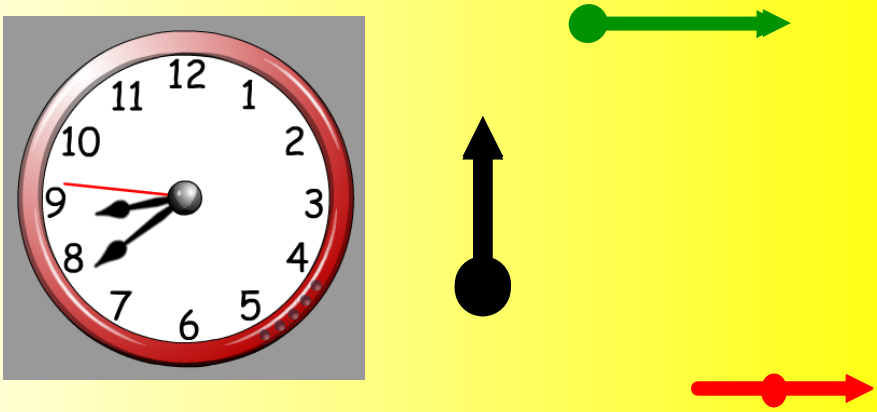
Design 3 flags of your own with
a) 1 line of symmetry
b) 2 lines of symmetry
c) 4 lines of symmetry

Colour in 4 squares on each.




4 squares

Clockwise



page 102-104 questions 1-5

When you have finished:

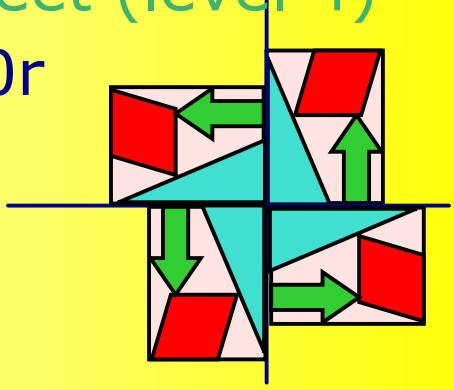
Big blue book: p40 and 41

Homework

order worksheet (level 4)

0r

Design a pattern to fill a quarter of your page.
Rotate it to create a pattern of order 4.
(level 5)

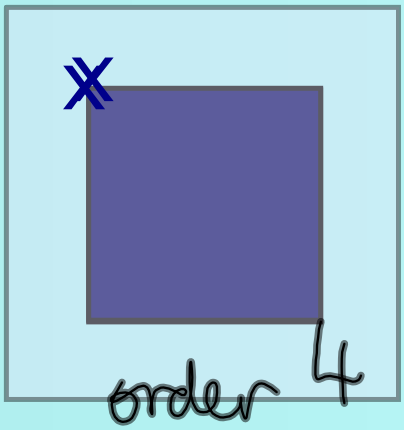


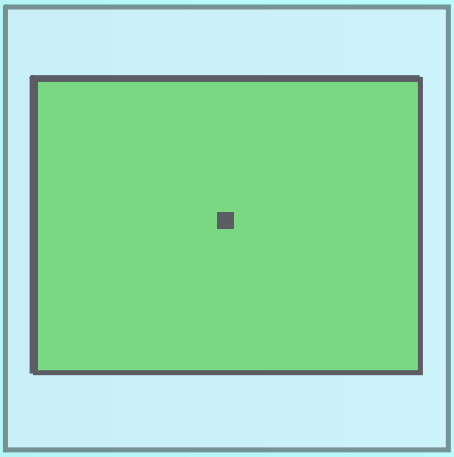
and

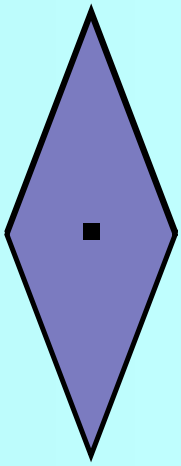
revise for test next Thursday

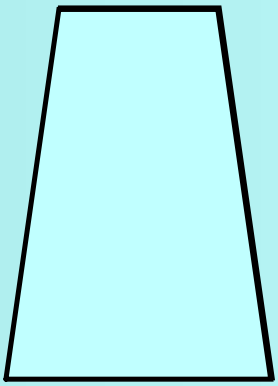
LO:Name the basic polygons and work out their order of rotational symmetry.

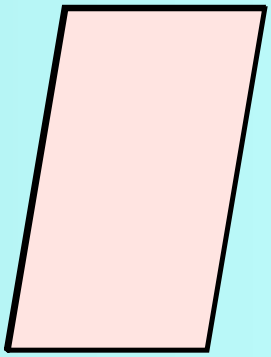
Rotational Symmetry: Finding the order of a shape





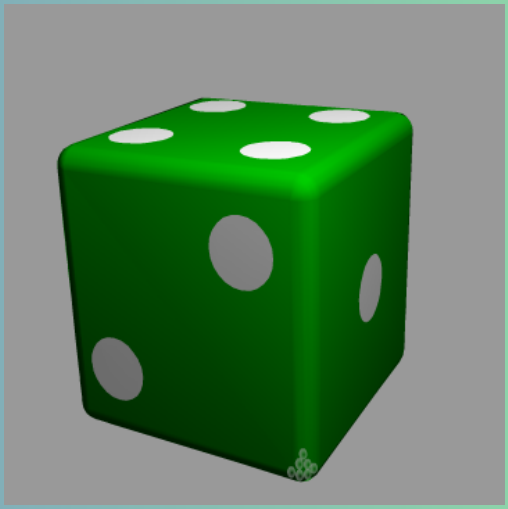




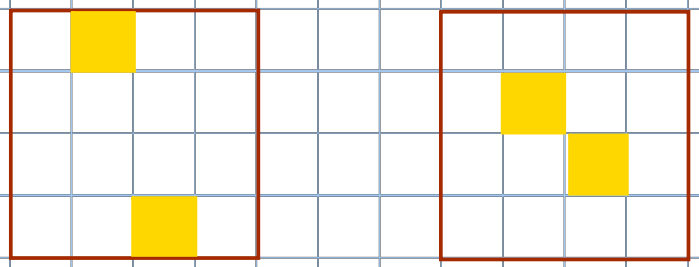


Use 2D shapes

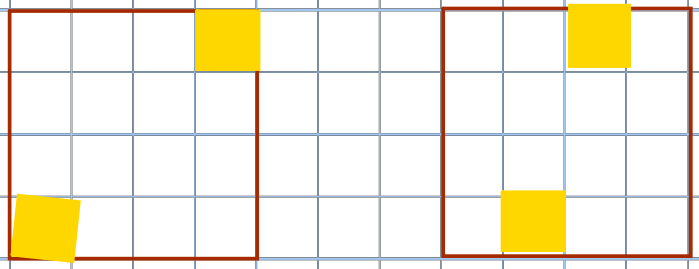
What is the order of rotational symmetry on the face of a dice?

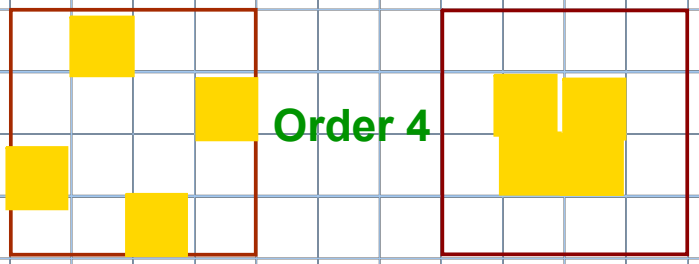


Rotational Symmetry



Order 2





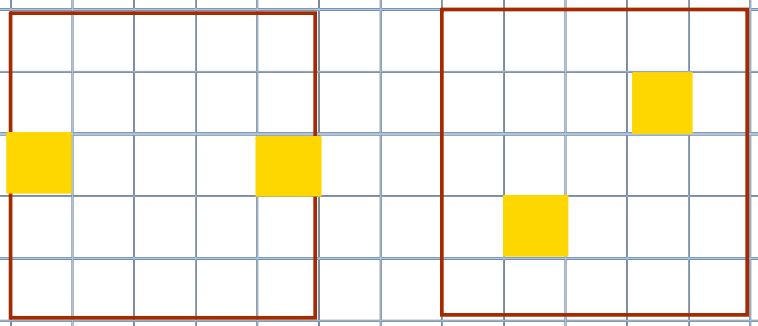
Order 4

Swap sheets and check your partner's with tracing paper.

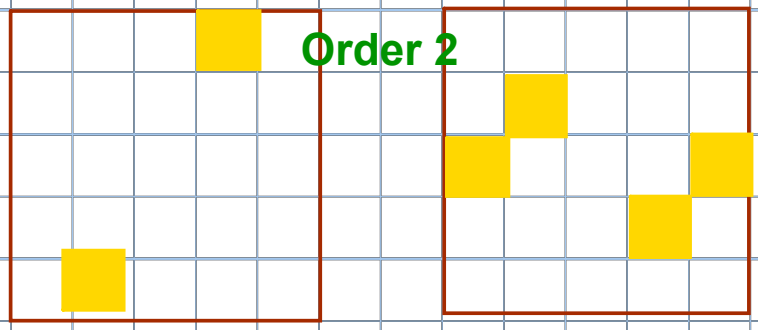
Draw 2 more squares. Decide what order they will have.
Make 2 patterns and see if your neighbour can tell you the order of each.

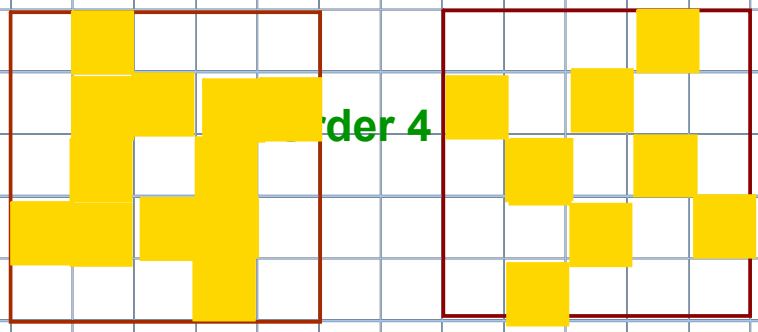
Look at rotational symmetry photos again.
What order of symmetry do they have?

Rotational Symmetry



Order 2



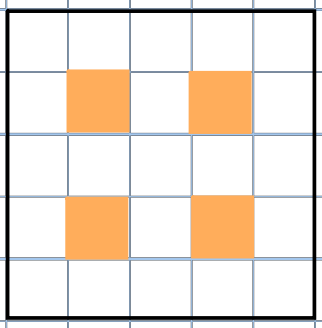


rder 4

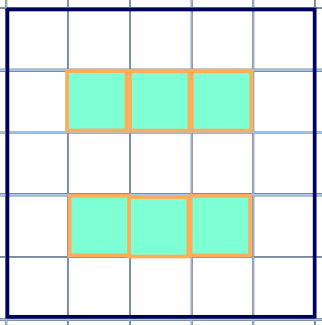
Draw 2 more squares.
One will have order 2 and one will have order 4.

Swap sheets and check your partner's with tracing paper.

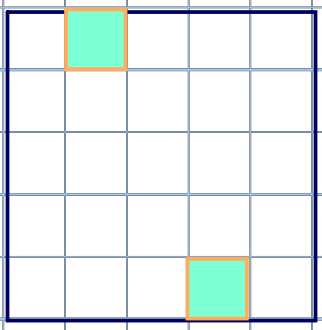
Look at rotational symmetry photos again.
What order of symmetry do they have?



Does this shape have reflectional symmetry?
Does it have rotational symmetry?



Does this shape have reflectional symmetry?
Does it have rotational symmetry?



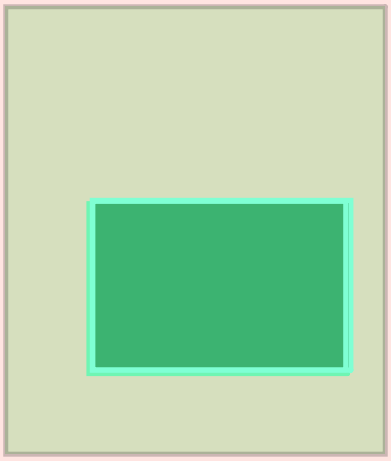
Does this shape have reflectional symmetry?
Does it have rotational symmetry?

Level 5 SATS question:
Draw a different pattern in a square that has rotational symmetry but not reflectional symmetry.

Can you draw a pattern that has reflectional symmetry but not rotational?

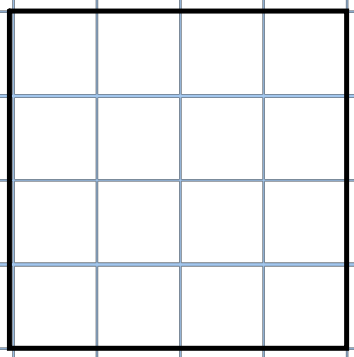
LO: To be able to rotate about (0,0) in all 4 quadrants.

Rotation

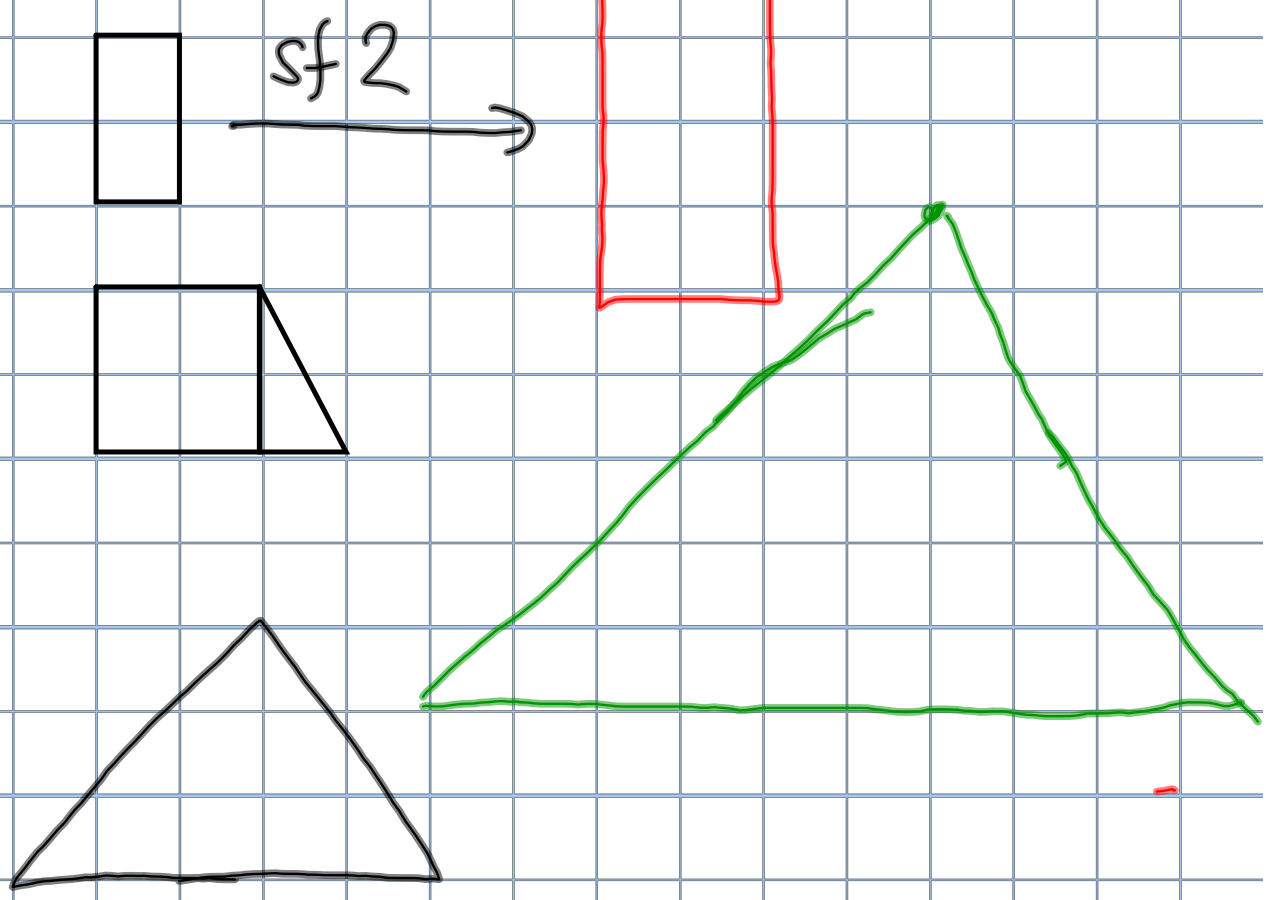


Copy the grid and rectangle into your book. Copy them onto tracing paper.

Translation, reflection and rotation



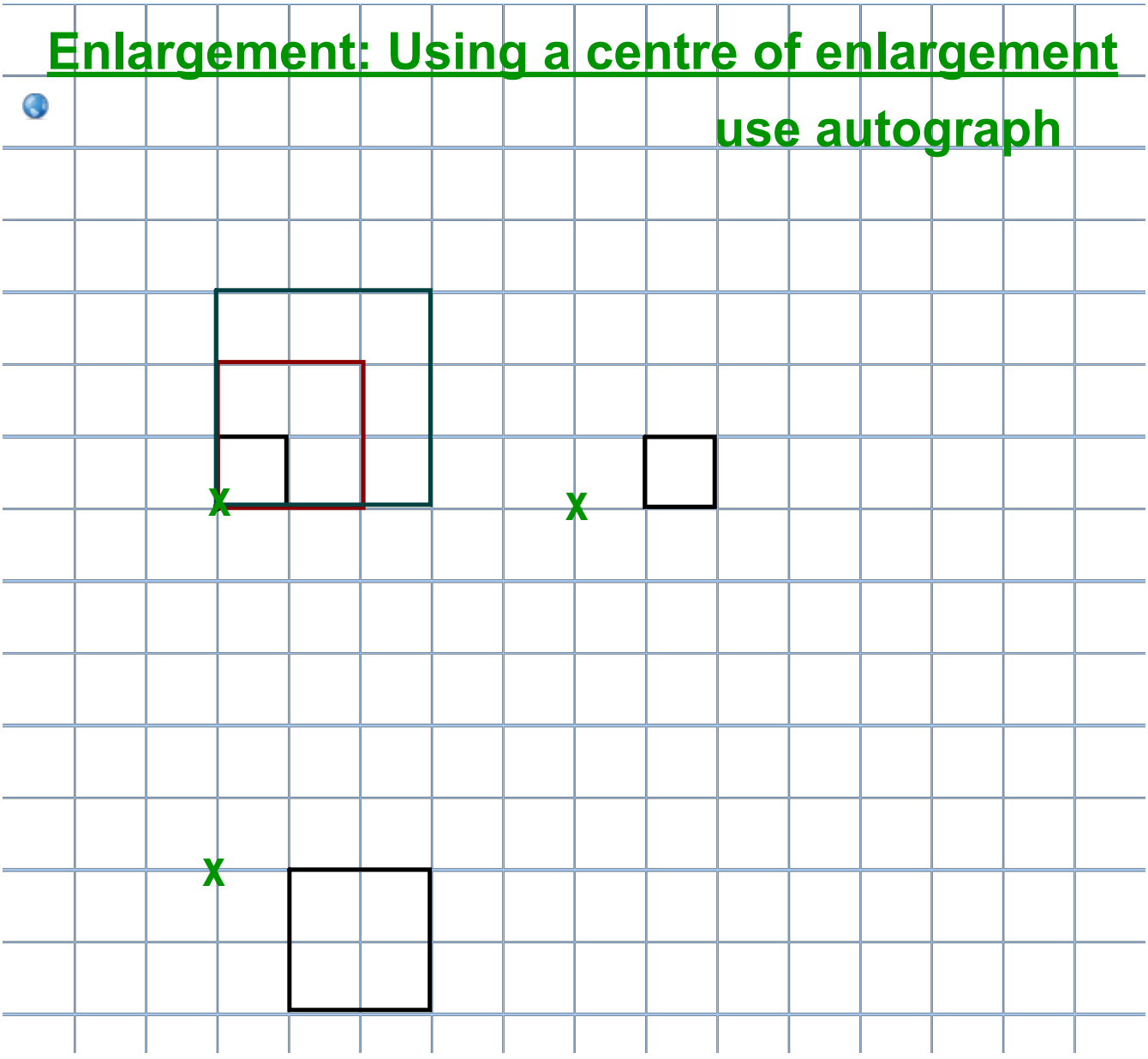
Enlargement



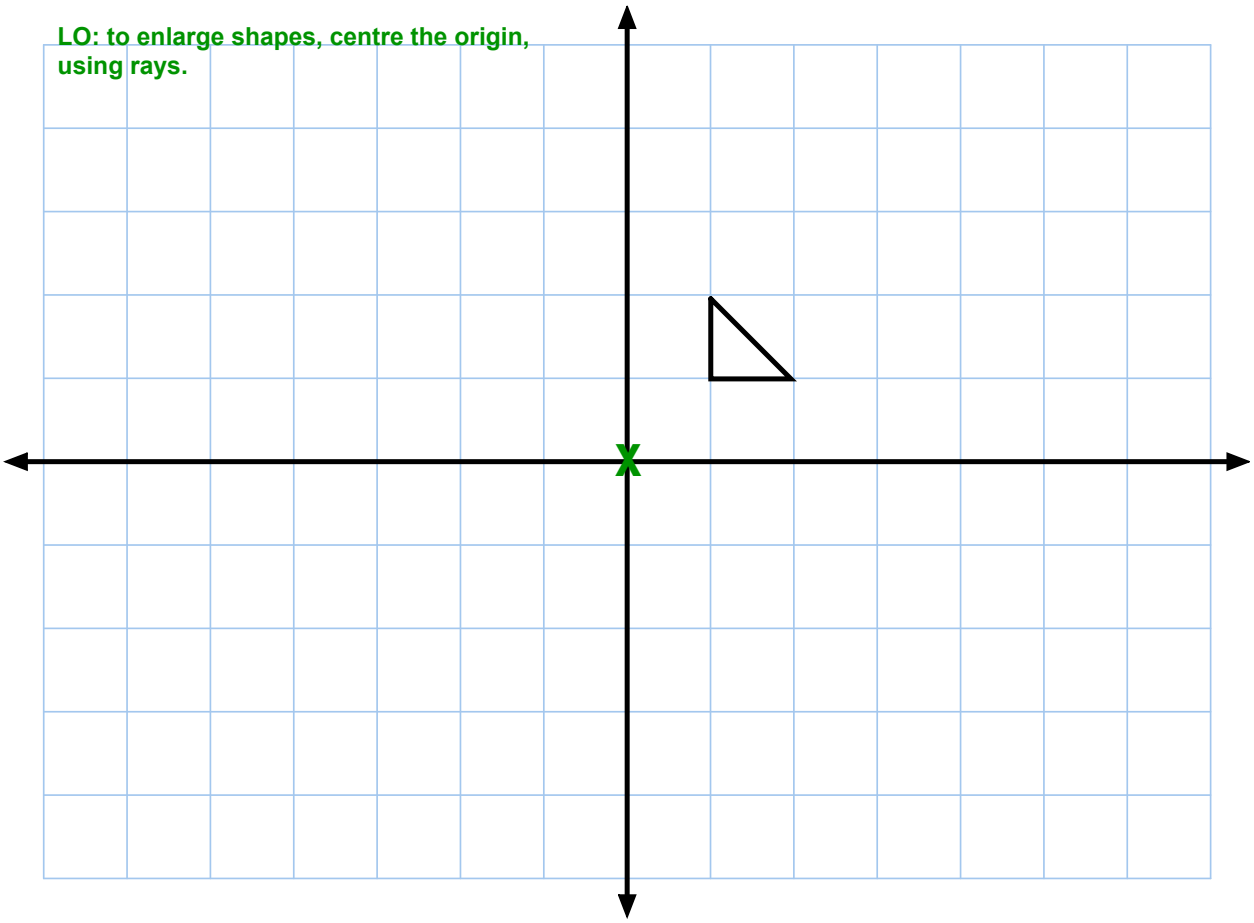
Enlargement is measured using a scale factor. The scale factor tells you what to multiply the lengths by.
For example: Scale factor 2 means double all the lengths
scale factor 3 means triple all the lengths
scale factor 4 means times all the lengths by 4 and so on..

Enlargement: Using a centre of enlargement

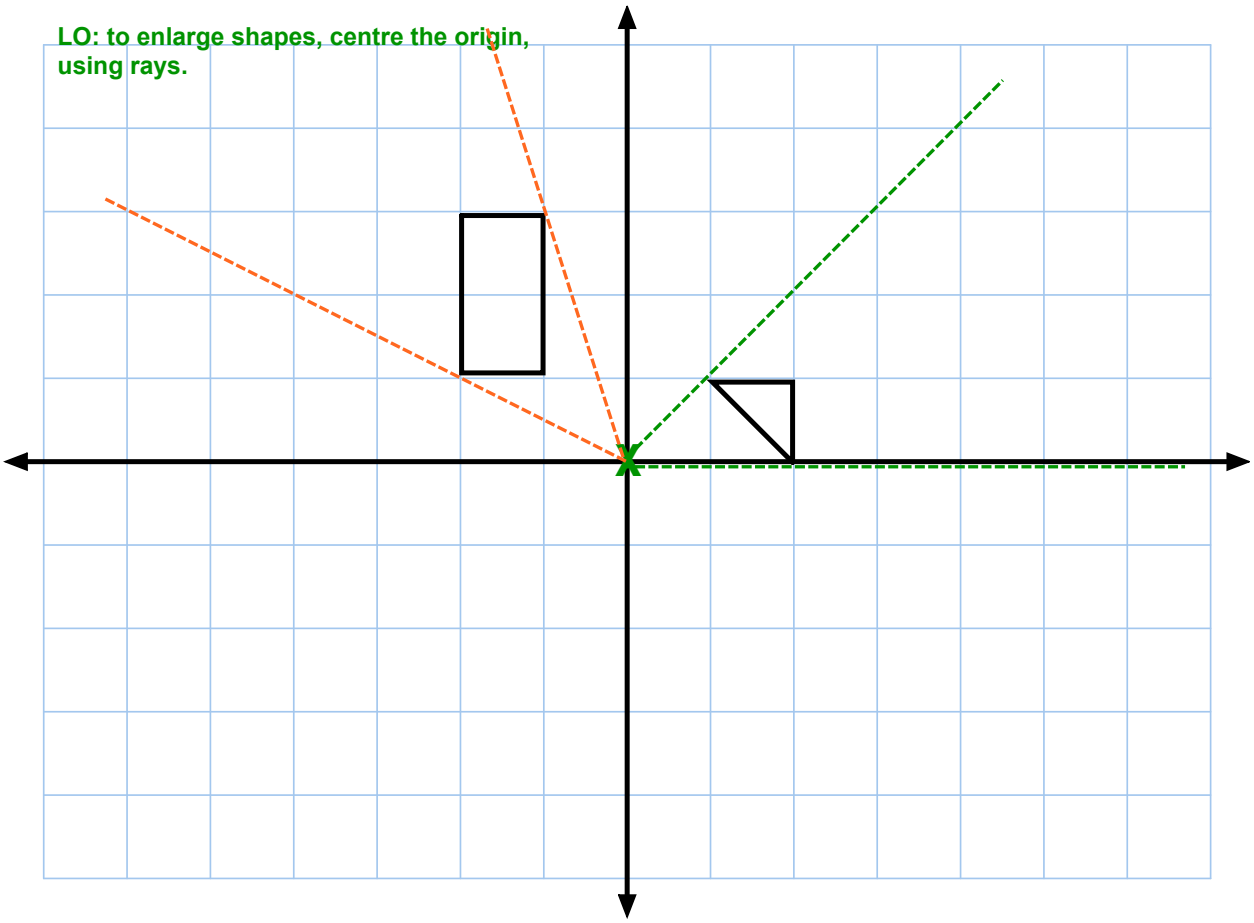
use autograph



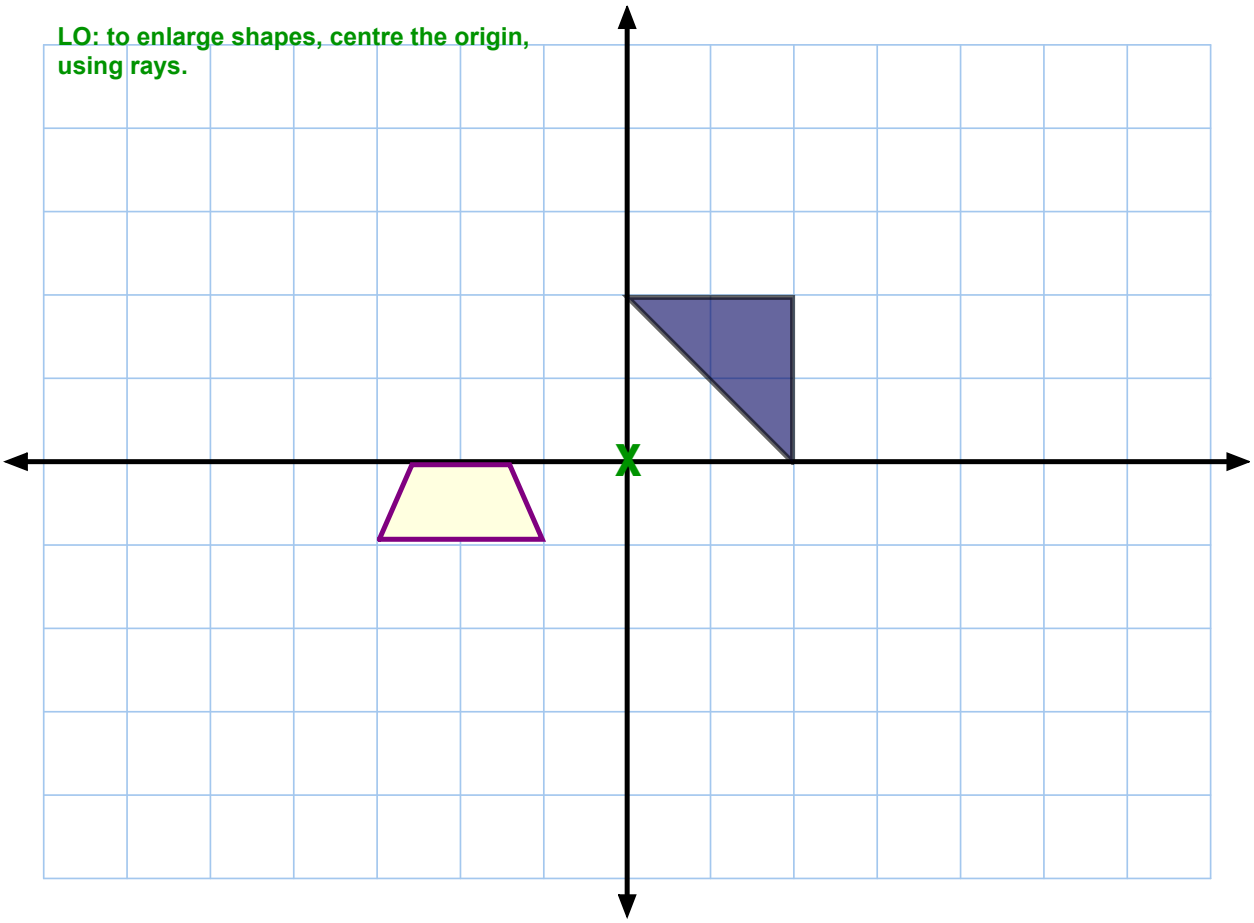
LO: to enlarge shapes, centre the origin, using rays.



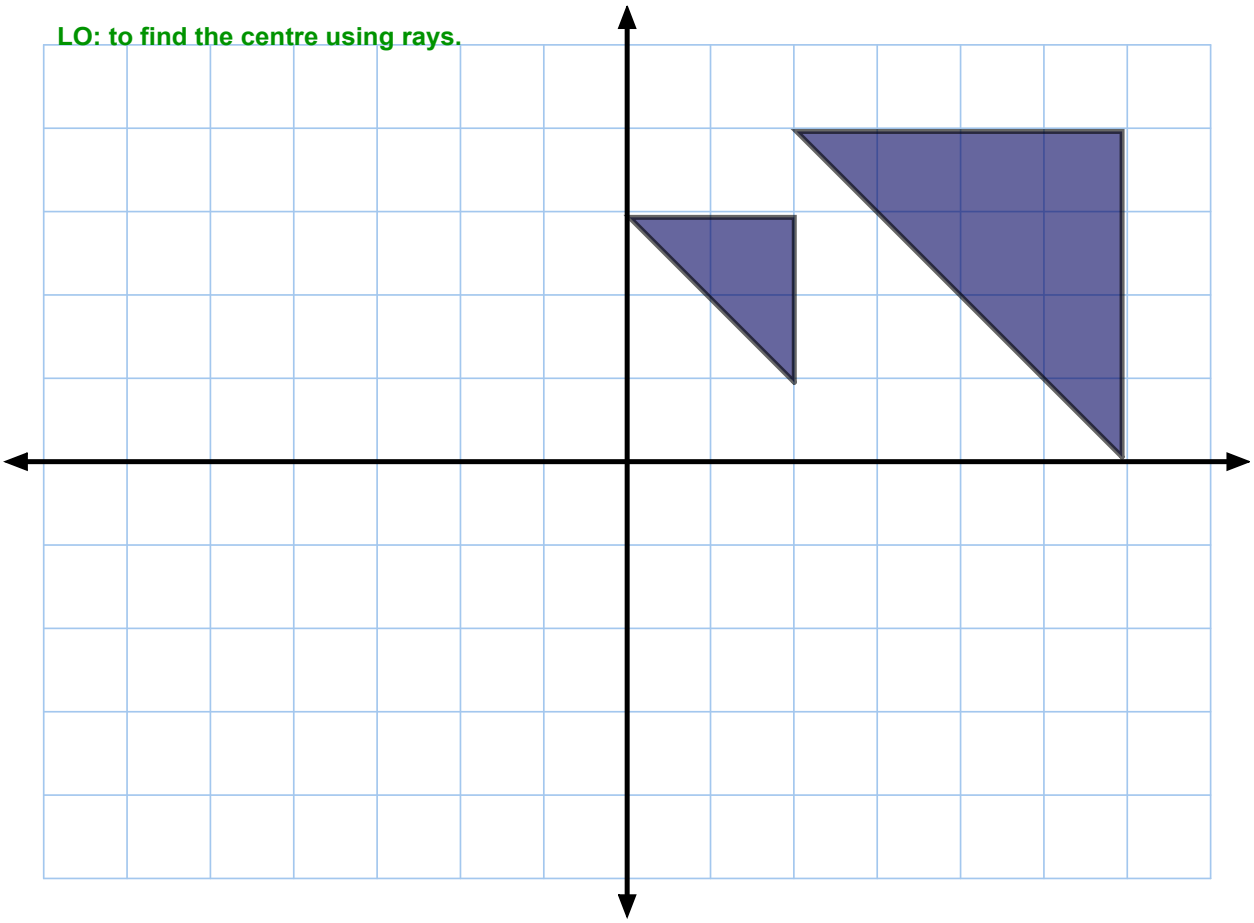
LO: to enlarge shapes, centre the origin, using rays.



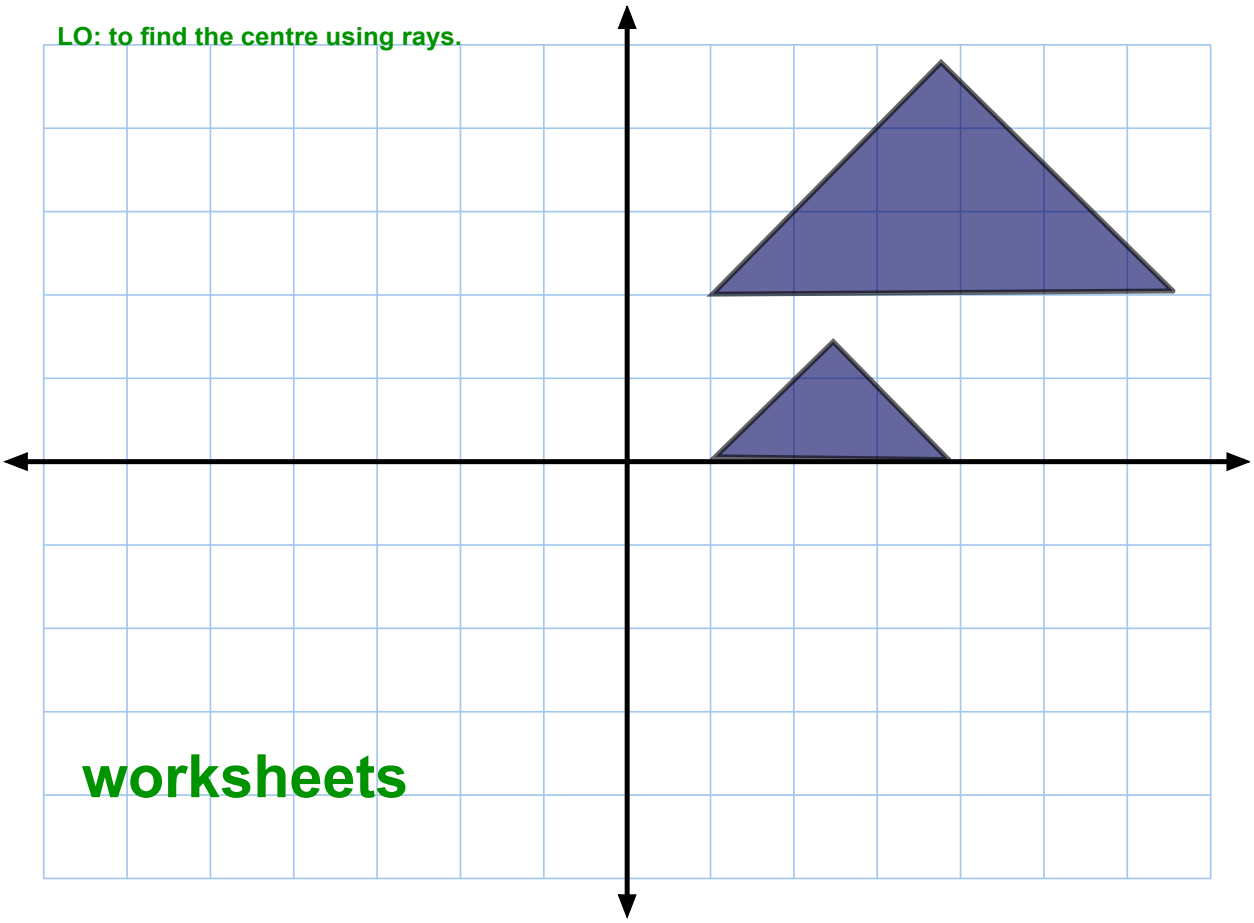
LO: to enlarge shapes, centre the origin, using rays.



LO: to find the centre using rays.



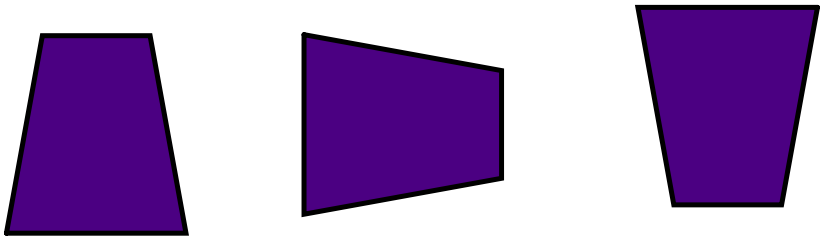
LO: to find the centre using rays.



worksheets

Congruent shapes

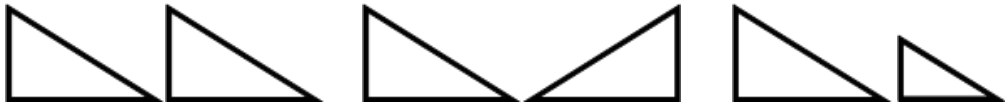
Shapes that are congruent are shapes that are identical.
They can be rotated, translated or reflected but not changed in size.



Name: _____

Congruent Shapes

CONGRUENT figures are the same size and shape.



CONGRUENT | CONGRUENT | NOT CONGRUENT

Write CONGRUENT or NOT CONGRUENT for each.

a. 

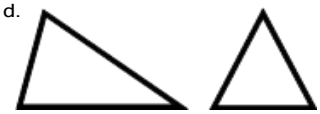
_____

b. 

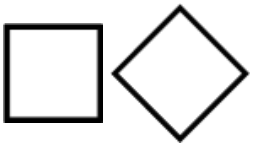
_____

c. 

_____

d. 

_____

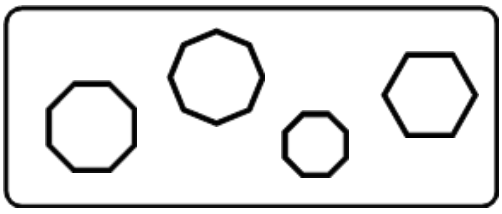
e. 

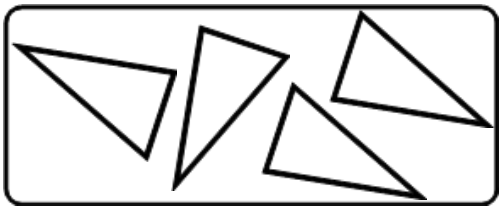
_____

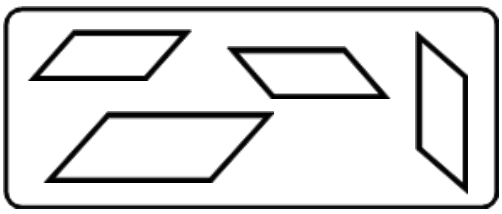
f. 

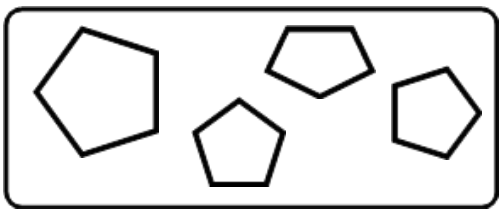
_____

Color all the congruent shapes in each box.

g. 

h. 

i. 

j. 

ANSWER KEY

Congruent Shapes

CONGRUENT figures are the same size and shape.

CONGRUENT CONGRUENT NOT CONGRUENT

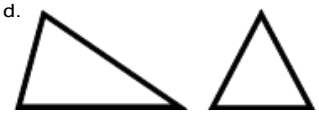
Write CONGRUENT or NOT CONGRUENT for each.

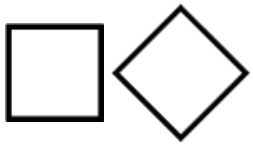
a. 

b. 

c. 

CONGRUENT NOT CONGRUENT CONGRUENT

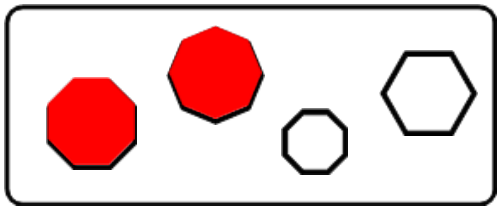
d. 

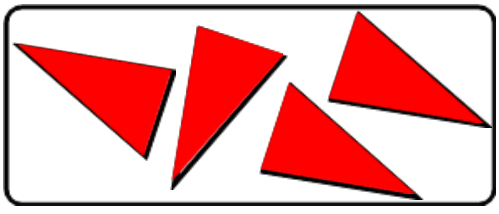
e. 

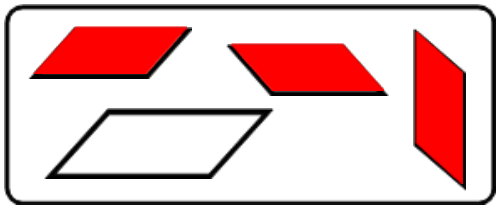
f. 

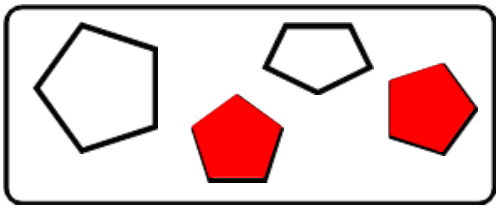
NOT CONGRUENT CONGRUENT NOT CONGRUENT

Color all the congruent shapes in each box.

g. 

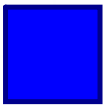
h. 

i. 

j. 

Enlargement: Its effect on perimeter and area

TASK 1



This square measures 1 cm by 1 cm.
The perimeter of the square is 1 + 1 + 1 + 1 = 4 cm.

(Note: The perimeter is the distance around a shape.)

You are going to try to find out if there is a link between the scale factor of an enlargement and the perimeter of the shapes.

i Copy the table below:

Scale Factor of Enlargement	Length of side of square (cm)	Perimeter of square (cm)
1	1	4
2		
3		
4		
5		

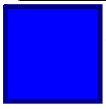
Enlarge the original square by a scale factor of 2 and work out the perimeter. Fill in the values in the table.

Repeat for scale factors 3, 4 and 5.

Write a sentence to describe what you think the perimeter will be if we enlarge the square by a scale factor of 6.

Write a sentence to describe what is happening to the perimeter as the scale factor increases.

TASK 2



This square measures 1 cm by 1 cm.
The area of the square is 1 x 1 = 1 cm^2.

(Note: The area is the space inside a shape.)

You are going to try to find out if there is a link between the scale factor of an enlargement and the area of the shapes.

Draw a table similar to the one above, but include area instead of perimeter.

Enlarge the original square by a scale factor of 2 and work out the area. Fill in the values in the table.

Repeat for scale factors 3, 4 and 5.

Write a sentence to describe what you think the area will be if we enlarge the square by a scale factor of 6.

Write a sentence to describe what is happening to the area as the scale factor increases.

Attachments

rotation.agg

rotation and reflection.gsp