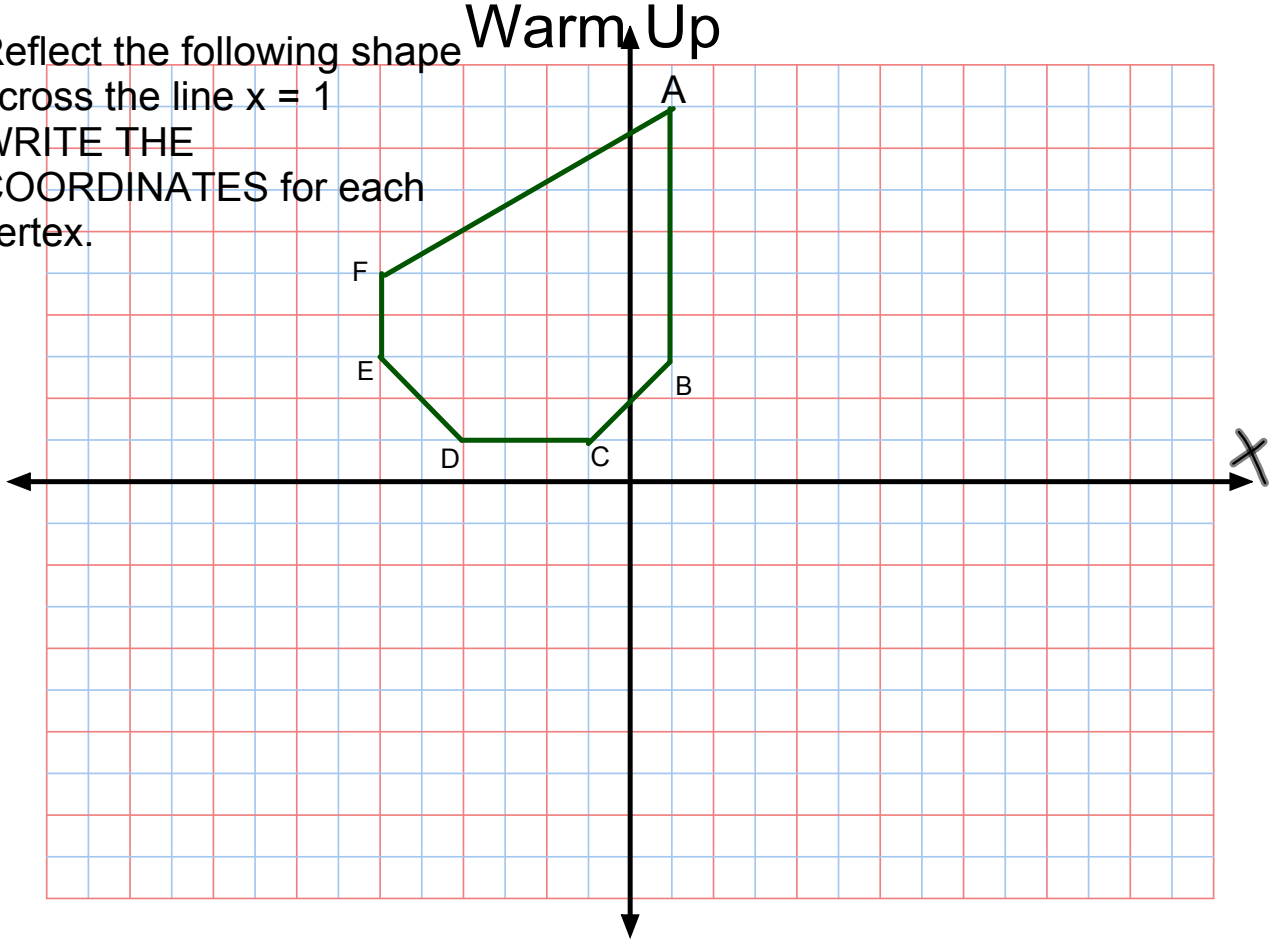
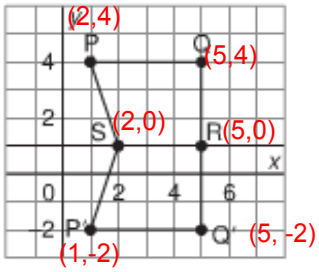
Warm Up

Reflect the following shape across the line x = 1
WRITE THE COORDINATES for each vertex.

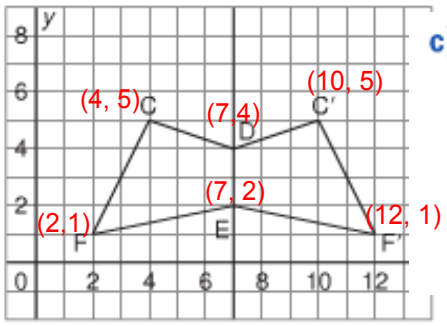


Solutions to last night's Homework

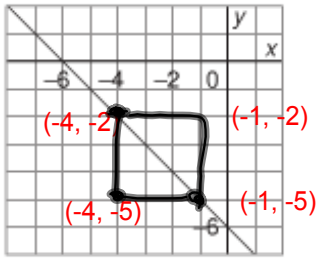
5. a)



b)



c)

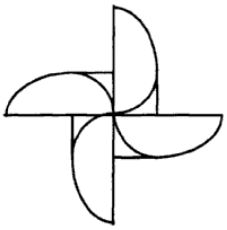


10. Pentagon A is the reflection image in the horizontal line through 7 on the *y*-axis.
The line of symmetry is the horizontal line through 7 on the *y*-axis.
Pentagon C is the reflection image in the vertical line through 5 on the *x*-axis.
The line of symmetry is the vertical line through 5 on the *x*-axis.
Pentagon D is the reflection image in the horizontal line through 3 on the *y*-axis.
The line of symmetry is the horizontal line through 3 on the *y*-axis.

April 23

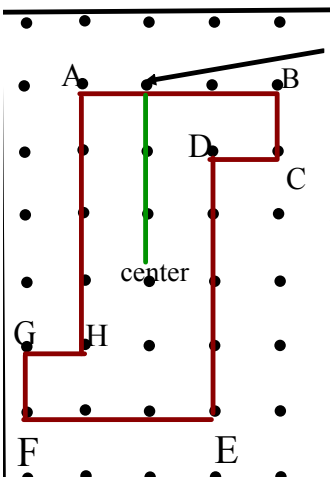
Section 7.6

Rotations & Rotational Symmetry



Lets rotate this object about its center

On your copy draw the rotated figure



This is a line segment to help indicate the angle the shape turned.

Rotate 90^0

Rotate 180^o

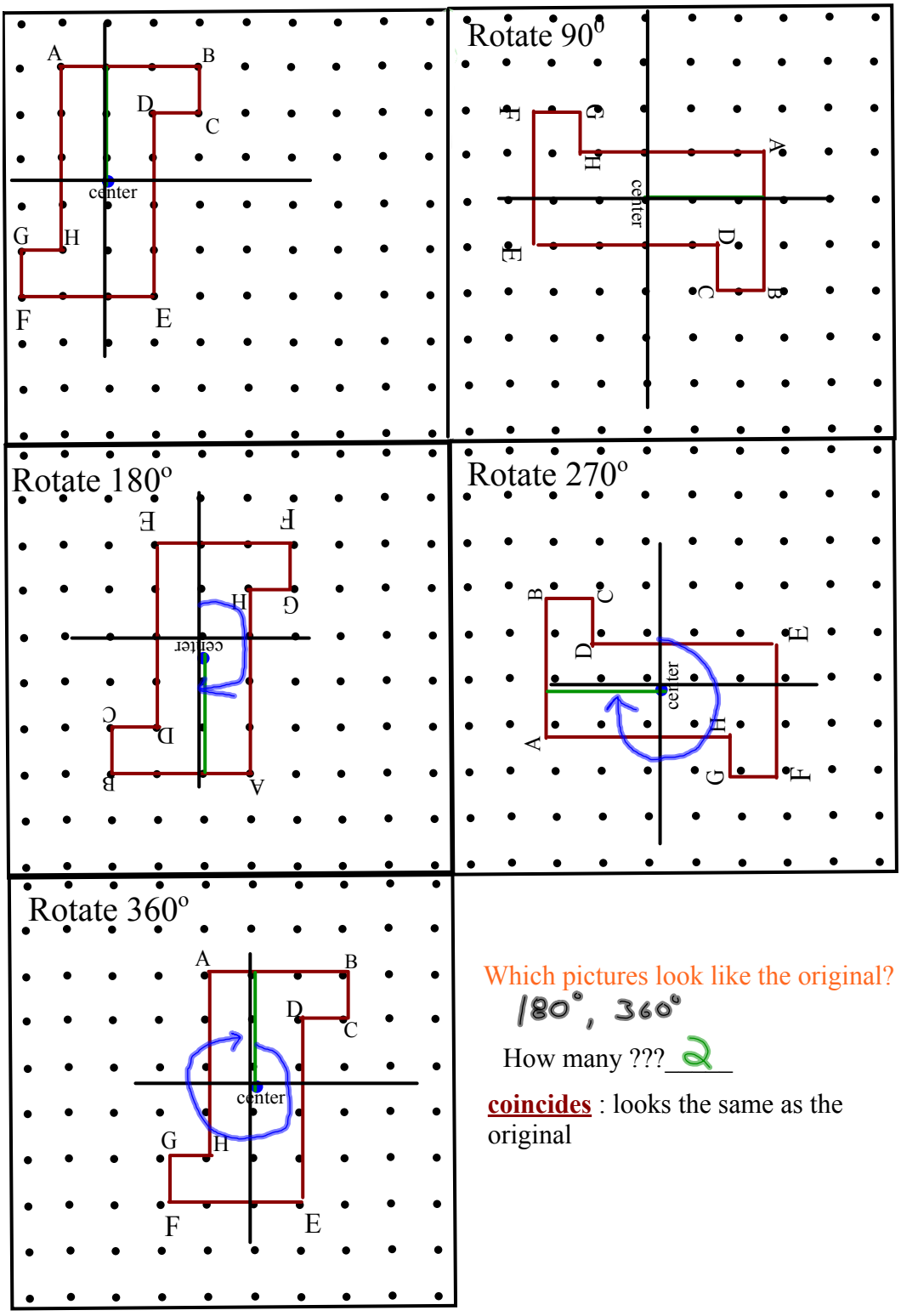
Rotate 270^o

Rotate 360^o

Which pictures look like the original?

Lets rotate this object about its center

On your copy draw the rotated figure



Which pictures look like the original?

180°, 360°

How many ???_2_

coincides : looks the same as the original

LOOK AT THE NEXT SLIDE THEN COME BACK TO THIS

This object has _____.

Angle of Rotaional Symmetry: _____360°_____

the order of rotation

Rotations

A shape has rotational symmetry when it coincides with itself after a rotation of less than 360^o about its centre.

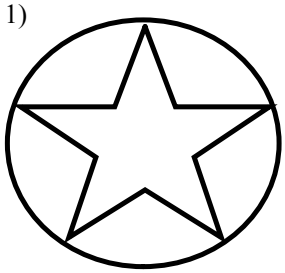
Order of Rotation is the number of times a shape coincides with itself during a 360^o rotation

How to state this?
rotational symmetry of order___

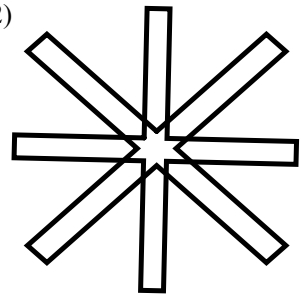
Angle of Rotaional Symmetry: $\frac{360^o}{\text{the order of rotation}}$

Determine if the following shapes have rotational symmetry. If so state the order of rotation and the angle of rotationsymmetry.

1)



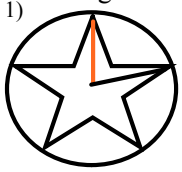
2)



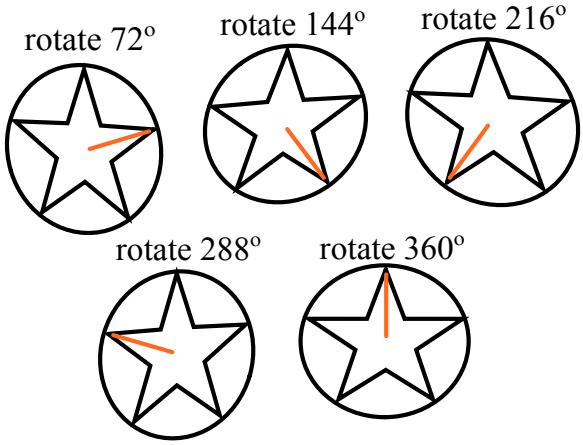
3)

Determine if the following shapes have rotational symmetry. If so state the order of rotation and the angle of rotationsymmetry.

1)



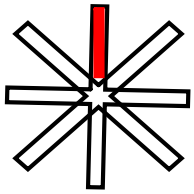
original

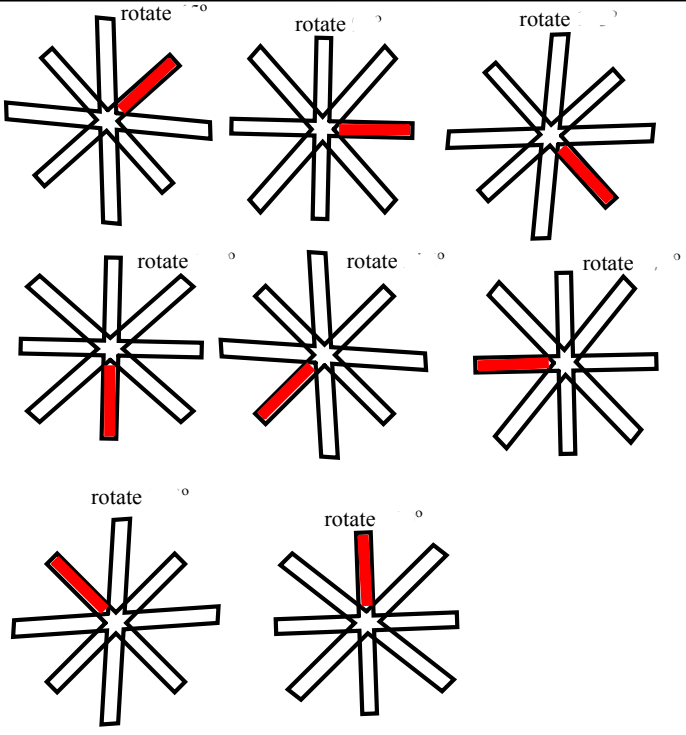


Rotational symmetry of order 5

Angle of rotation: $\frac{360^\circ}{5} = 72^\circ$

2)





Rotational symmetry of order

Angle of rotation: $\frac{360^\circ}{\quad} =$

3)

Is rotated one complete turn before it coincides. It DOES NOT have rotational symmetry.

Rotational Directions

clockwise 

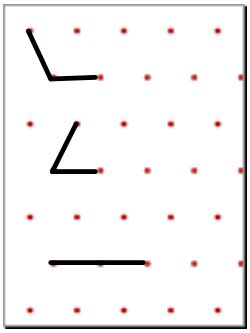
Counter - Clock Wise Rotations 

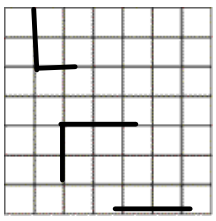
Rotations Are Transformations

Text book

-Dot paper will be used to illustrate rotations of 60^{o} (or 120^{o} or 180^{o})

- Grid paper will be used to illustrate rotations of 90^{o} (or 180^{0} or 270^{o})





Class/Homework

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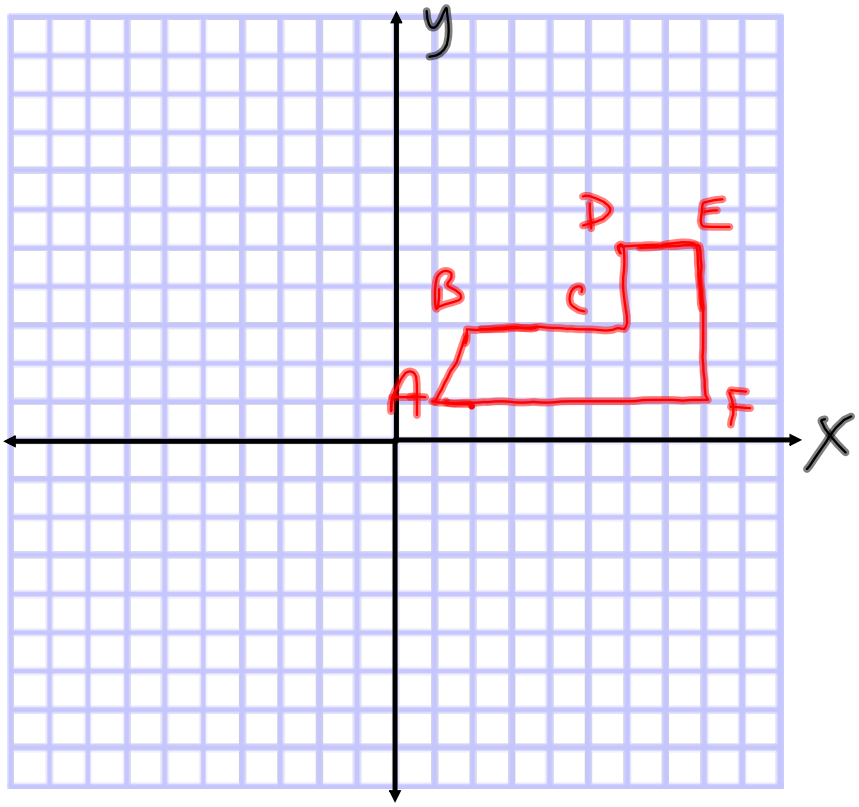
1, 2, 3, 4, 5, 6



April 24, 2012

Draw rotations of 90° and 180° clockwise.