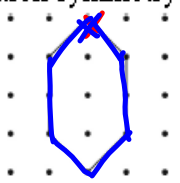
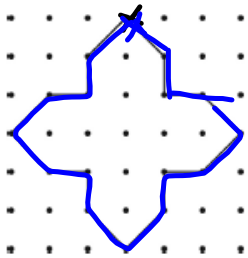
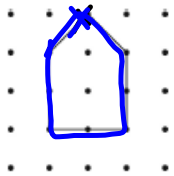
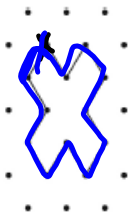
Warm-Up

1. Which polygons have rotational symmetry? State the order of rotation and the angle of rotation symmetry for each.

a) 

b) 

c) 

d) 

	a)	b)	c)	d)
order of rotation	2	4	None	2
angle of rotation	$\frac{360}{2} = 180^\circ$	$\frac{360}{4}$ 90°		$\frac{360}{2}$ 180°

4. What is the angle of rotation symmetry for a shape with each order of rotational symmetry?

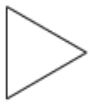
a) 3 b) 5 c) 9 d) 12

5. What is the order of rotational symmetry for each angle of rotation symmetry?

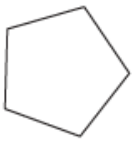
a) 60° b) 20° c) 45° d) 36°

6. What is the order of rotational symmetry and angle of rotation symmetry for each regular polygon?

a) an equilateral triangle



b) a regular pentagon



4. What is the angle of rotation symmetry for a shape with each order of rotational symmetry?

a) 3 120° b) 5 72° c) 9 40° d) 12 30°

5. What is the order of rotational symmetry for each angle of rotation symmetry?

a) 60° 6 b) 20° 18 c) 45° 8 d) 36° 10

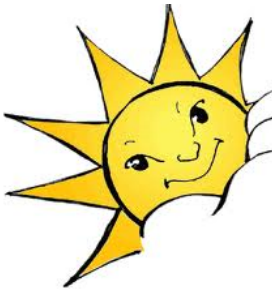
6. What is the order of rotational symmetry and angle of rotation symmetry for each regular polygon?

a) an equilateral triangle

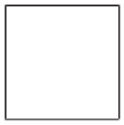
3; 120°

b) a regular pentagon

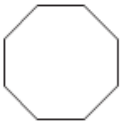
5; 72°



c) a square



d) a regular octagon

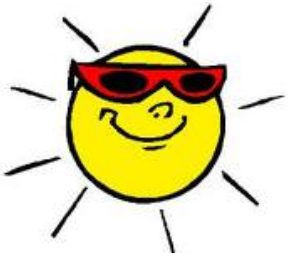


c) a square

4; 90°

d) a regular octagon

8; 45°



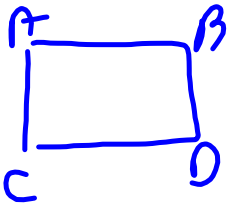
There are three types of transformations:

1. reflections [Line of reflection]
   - Reflect through x-axis
   - Reflect through y-axis

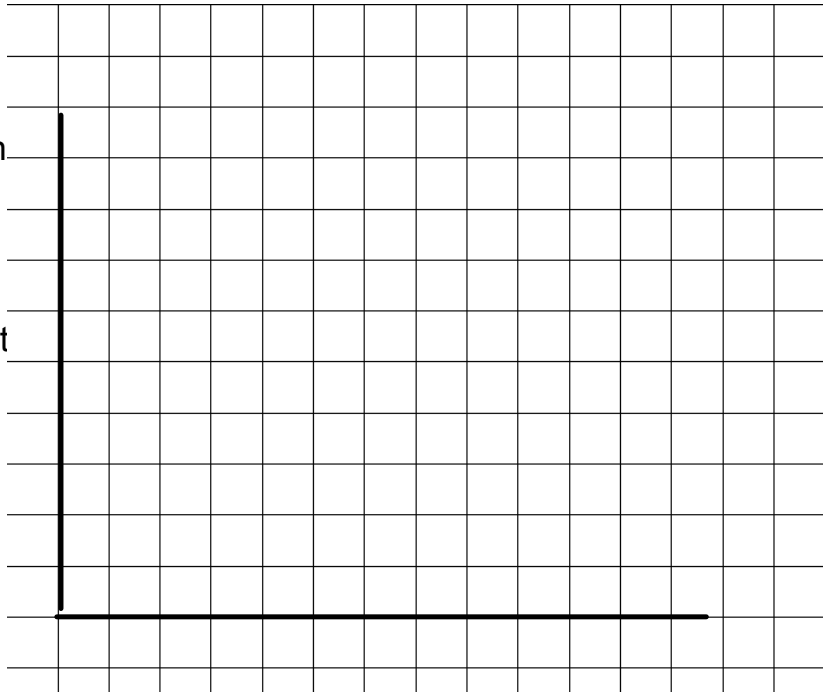
   ***oblique** two coordinates
2. rotations
   - order of rotation
   - angle of rotation
3. translations [slide]

   Left 3 up 2 [L3U2]

   right 4 down2 [R4 D2]



On grid paper plot the following points:
A (1, 3) B (3,1) and C (5,5)



Do the following Transformation

1. A translation [slide] 2 units right and 2 units down of ABC.

2. A rotation of ABC 180 about vertex C

3. A line of reflection through b on y axis

On grid paper plot the following points:
A (1, 3) B (3,1) and C (5,5)

Do the following Transformations:

1. A translation [slide] 2 units right and 2 units down of ABC.

2. A rotation of ABC 180 about vertex C