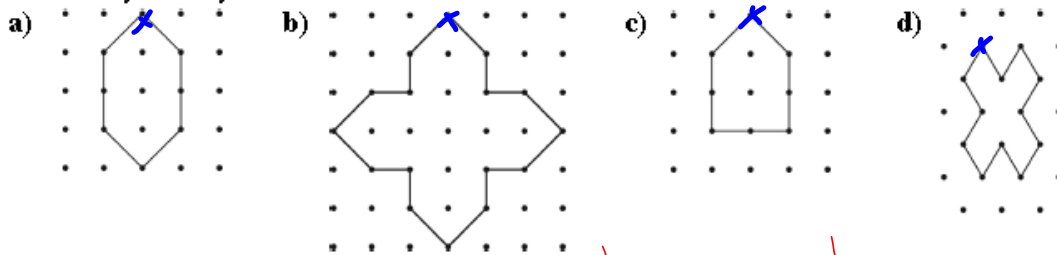




Warm-Up

May 1, 2017

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



order of rotation

[# of times coincides with itself]

angle of rotation

$$\frac{360^\circ}{\text{order}}$$

2

4

none

2

$$\frac{360}{2} = 180^\circ$$

90°

none

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?

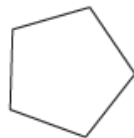
- a) 60° b) 20° c) 45° d) 36°

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

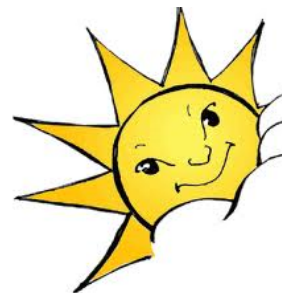


3; 120°

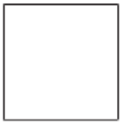
- b) a regular pentagon



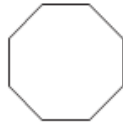
5; 72°



c) a square



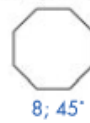
d) a regular octagon



c) a square



d) a regular octagon



There are three types of transformations:

1. reflections **[Line of reflection]**

Section 7.5

- Reflect through x-axis [vertical]
- Reflect through y-axis [horizontal]
- *oblique two coordinates

2. rotations

Section 7.6

- order of rotation
- angle of rotation $\left[\frac{360^\circ}{\text{order}} \right]$

3. translations [slide]

Left 3 up 2 [L3U2]

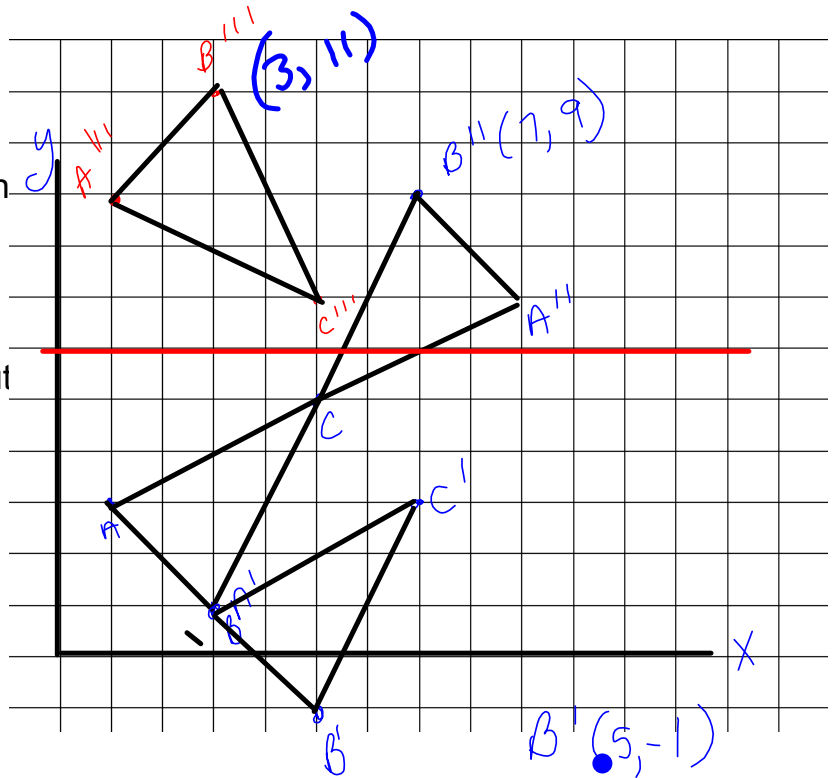
right 4 down 2 [R4 D2]

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 6 on y axis



Homework
Page 365

Homework

angle rotation = $\frac{360}{\text{order}}$

order rotational symmetry = $\frac{360^\circ}{\text{angle of rotation}}$

4, 5,

6 order of rotation | angle of rotation

count blocks

9, 13[a,b], 14, 15

use coordinates.

Homework Check Questions Pass in

Page 373 3

Page 374 11 Plot using coordinates from picture

12 a,b

13 Plot using coordinates from picture

} when finished Assignment