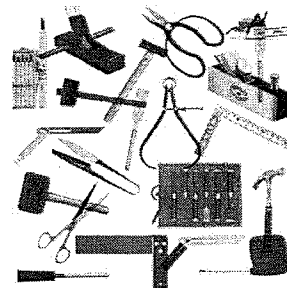


# Congruence, Construction, and Proof | 6.13

## Ready, Set, Go!



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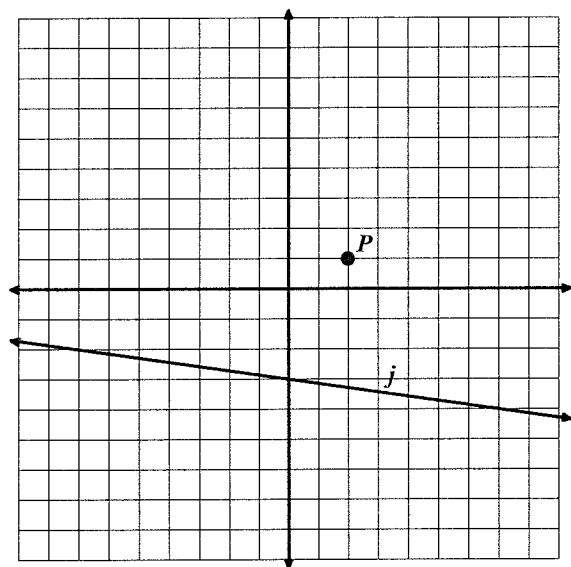
### Ready

Topic: Rotation symmetry for regular polygons and transformations

1. What angles of rotational symmetry are there for a pentagon?
2. What angles of rotational symmetry are there for a hexagon?
3. If a regular polygon has an angle of rotational symmetry that is  $40^\circ$ , how many sides does the polygon have?

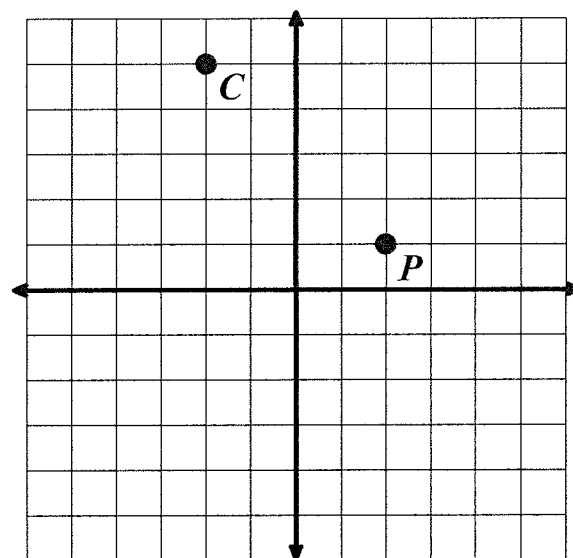
On each given coordinate grid below perform the indicated transformation.

4.



Reflect point  $P$  over line  $j$ .

5.



Rotate point  $P$   $90^\circ$  clockwise around point  $C$ .

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## Set

Topic: Constructing regular polygons inscribed in a circle.

6. Construct an isosceles triangle that incorporates  $\overline{CD}$  as one of the sides. Construct the inscribing circle around the triangle.



7. Construct a hexagon that incorporates  $\overline{CD}$  as one of the sides. Construct the inscribing circle around the hexagon.



8. Construct a square that incorporates  $\overline{CD}$  as one of the sides. Construct the inscribing circle around the square.



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**Go**

Topic: Finding distance and slope.

**For each pair of given coordinate points find distance between them and find the slope of the line that passes through them. Show all your work.**

9.  $(-2, 8), (3, -4)$

a. Slope:

b. Distance:

10.  $(-7, -3), (1, 5)$

a. Slope:

b. Distance:

11.  $(3, 7), (-5, 9)$

a. Slope:

b. Distance:

12.  $(1, -5), (-7, 1)$

a. Slope:

b. Distance:

13.  $(-10, 31), (20, 11)$

a. Slope:

b. Distance:

14.  $(16, -45), (-34, 75)$

a. Slope:

b. Distance:

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