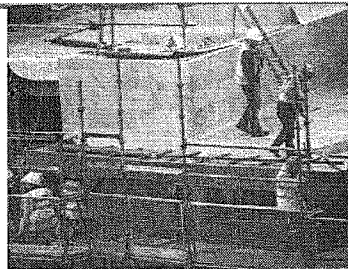


Congruence, Construction, and Proof | 6.11

Ready, Set, Go!



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Ready

Topic: Tools for construction and geometric work.

- Using your compass draw several concentric circles that have point A as a center and then draw those same sized concentric circles that have B as a center. What do you notice about where all the circles with center A intersect all the corresponding circles with center B?

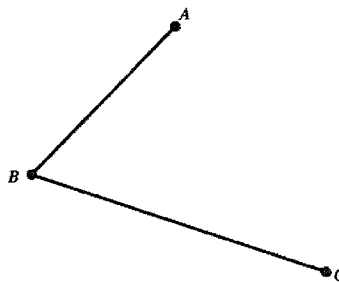
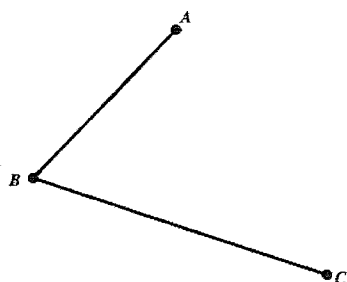


- In the problem above you have demonstrated one way to find the midpoint of a line segment. Explain another way that a line segment can be bisected without the use of circles.

Set

Topic: Constructions with compass and straight edge.

- Bisect the angle below do it with compass and straight edge as well as with paper folding.



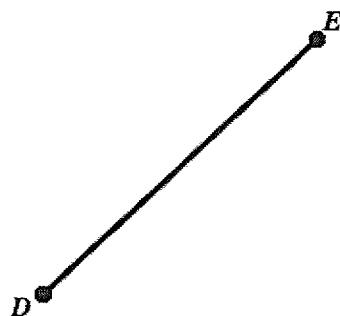
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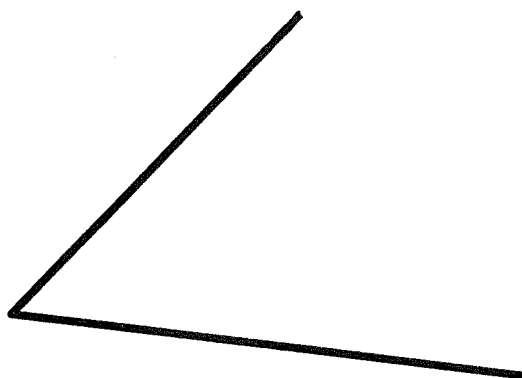
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4. Copy the segment below using construction tools of compass and straight edge, label the image $D'E'$.



5. Copy the angle below using construction tool of compass and straight edge.



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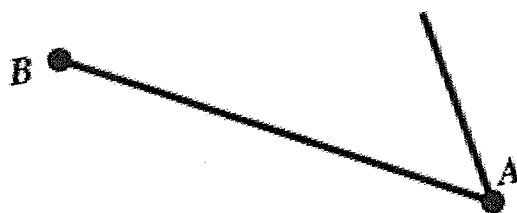
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6. Construct a rhombus on the segment AB that is given below and that has point A as a vertex. Be sure to check that your final figure is a rhombus.



7. Construct a square on the segment CD that is given below. Be sure to check that your final figure is a square.



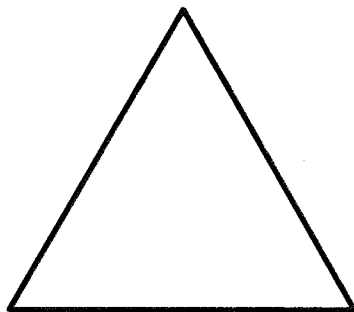
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8. Given the equilateral triangle below, find the center of rotation of the triangle using compass and straight edge.



Go

Topic: Solving systems of equations review.

Solve each system of equations. Utilize substitution, elimination, graphing or matrices.

9.
$$\begin{cases} x = 11 + y \\ 2x + y = 19 \end{cases}$$

10.
$$\begin{cases} -4x + 9y = 9 \\ x - 3y = -6 \end{cases}$$

11.
$$\begin{cases} x + 2y = 11 \\ x - 4y = 2 \end{cases}$$

12.
$$\begin{cases} y = -x + 1 \\ y = 2x + 1 \end{cases}$$

13.
$$\begin{cases} y = -2x + 7 \\ -3x + y = -8 \end{cases}$$

14.
$$\begin{cases} 4x - y = 7 \\ -6x + 2y = 8 \end{cases}$$

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