

READY, SET, GO!

Name

Key

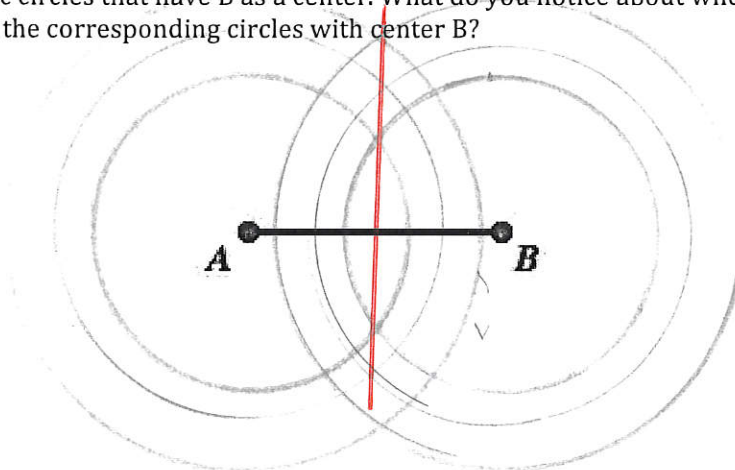
Period

Date

### READY

Topic: Tools for construction and geometric work.

1. 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?

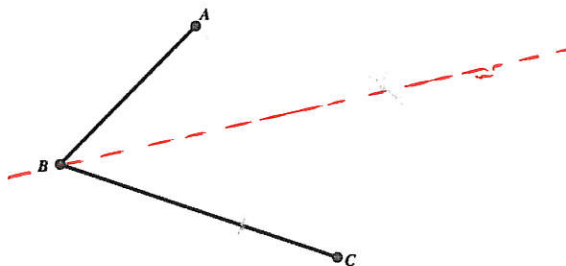
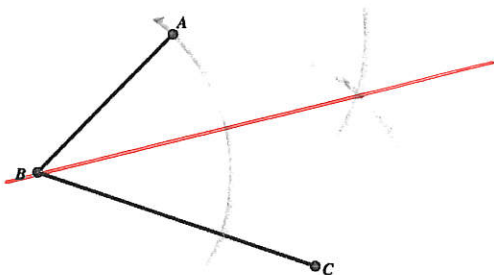


2. In the problem above you have demonstrated one way to find the midpoint of a line segment. Explain another way that a line segment can be bisected without the use of circles.

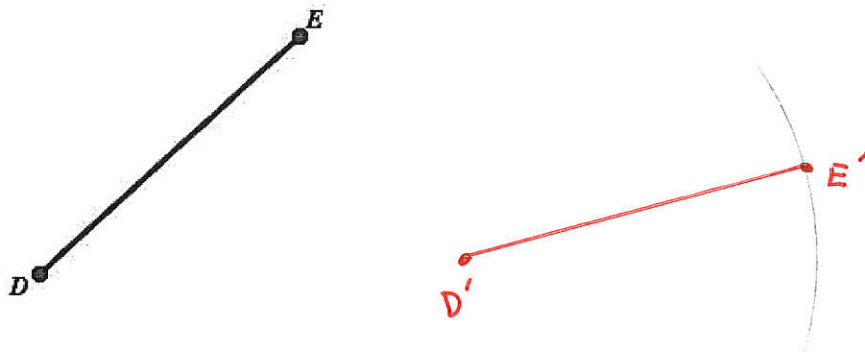
### SET

Topic: Constructions with compass and straight edge.

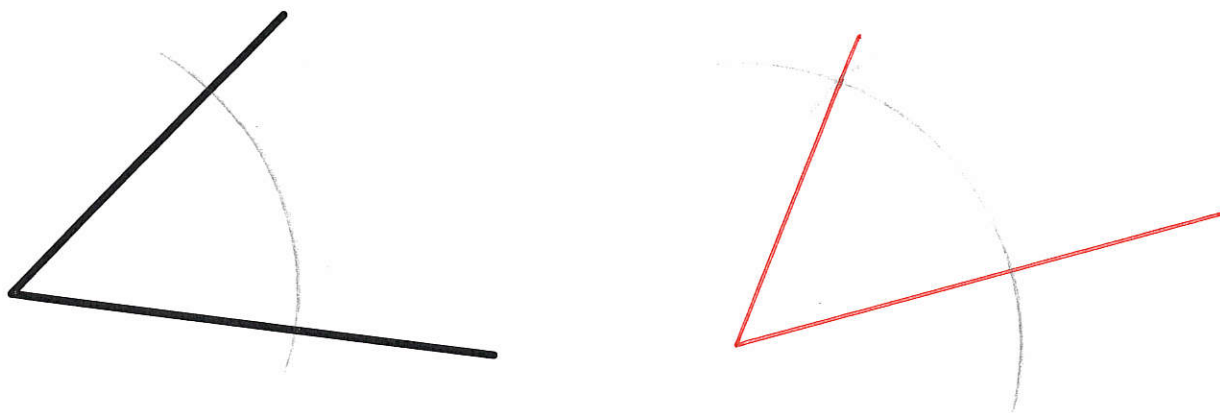
3. Bisect the angle below do it with compass and straight edge as well as with paper folding.



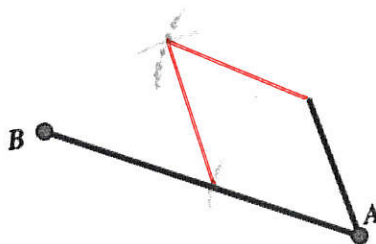
4. Copy the segment below using construction tools of compass and straight edge, label the image  $D'E'$ .



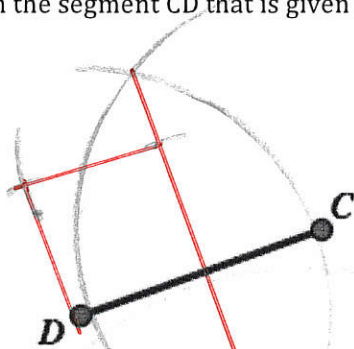
5. Copy the angle below using construction tool of compass and straight edge.



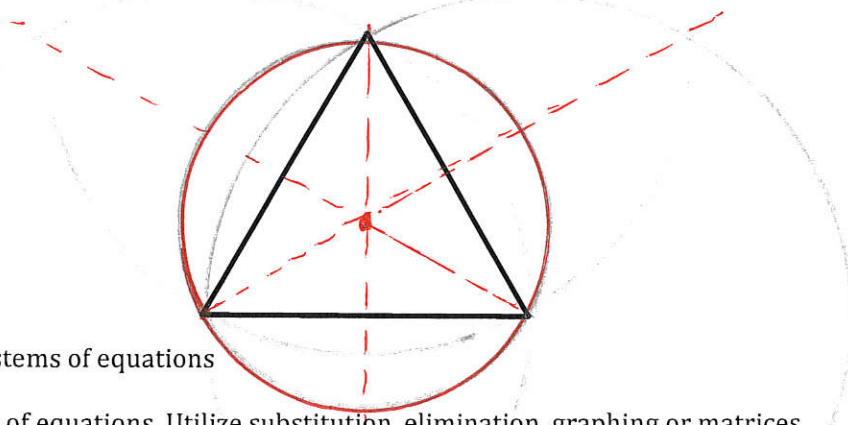
6. Construct a rhombus on the segment  $AB$  that is given below and that has point  $A$  as a vertex. Be sure to check that your final figure is a rhombus.



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



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

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

9. 
$$\begin{cases} x = 11 + y \\ 2x + y = 19 \end{cases}$$
  
 $x = 8$   
 $y = -3$

10. 
$$\begin{cases} -4x + 9y = 9 \\ x - 3y = -6 \end{cases}$$
  
 $x = 9$   
 $y = 5$

11. 
$$\begin{cases} x + 2y = 11 \\ x - 4y = 2 \end{cases}$$
  
 $x = 8$   
 $y = \frac{3}{2}$  or 1.5

12. 
$$\begin{cases} y = -x + 1 \\ y = 2x + 1 \end{cases}$$
  
 $x = 0$   
 $y = 1$

13. 
$$\begin{cases} y = -2x + 7 \\ -3x + y = -8 \end{cases}$$
  
 $x = 3$   
 $y = 1$

14. 
$$\begin{cases} 4x - y = 7 \\ -6x + 2y = 8 \end{cases}$$
  
 $x = 11$   
 $y = 37$