

EQ: G.CO.1 What are the principles of segment and angle addition?

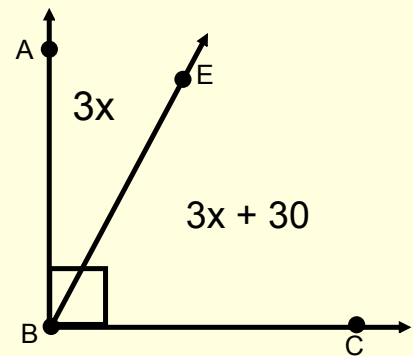
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<p>Week 2, Lesson 1</p> <ol style="list-style-type: none"> 1. Warm Up 2. Notes 3. Left-side practice 4. Independent practice 5. Closure 	<p>Segment addition and Angle addition Postulate</p>
12	13

Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

Warm Up:

1. Give the diagram at the right, what is the value of x ?
2. Find the measure of angle ABE and angle CBE.
3. Which of the following terms describes the relationship between these two angles (Circle all that apply.)?
 - (a) vertical angles
 - (b) complementary angles
 - (c) supplementary angles
 - (d) **adjacent angles** (*adjacent* means that it shares a side)

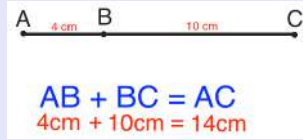
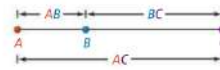


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Segment Addition

If three points $A, B,$ and C are collinear and B is between A and $C,$ then $AB + BC = AC,$



Examples:

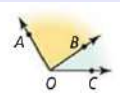
1. If $EG = 59,$ what are EF and FG ?



2. B is the **midpoint** of $AC.$ If AB is $x + 4$ and AC is $32,$ what is the value of x ?

Angle Addition

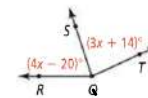
If point B is in the interior of $\angle AOC,$ then $m\angle AOB + m\angle BOC = m\angle AOC.$



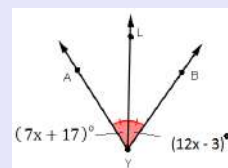
Example:

- 3.

If $m\angle RQT = 155,$ what are $m\angle RQS$ and $m\angle TQS$?



4. YL **bisects** angle $AYB.$ What is the value of x and the measure of each angle?



Summary:

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G.CO.1: Segment/Angle Addition Practice

1. Point C is between points A and E.

(a) If $AC = 24$ in. and $CE = 13$ in, then $AE =$ _____ (b) If $CE = 7$ in. and $AE = 23$ in. then $AC =$ _____

Draw a Picture with the information given:

Draw a Picture with the information given:



3. $TU = 5x - 2$, $UB = 3x + 1$,

$TB = 23$

Fill in the information on the picture:

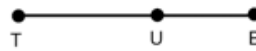


Solve for x:

4. $TU = 7x - 1$, $UB = 4x - 8$,

$TB = 5x + 21$

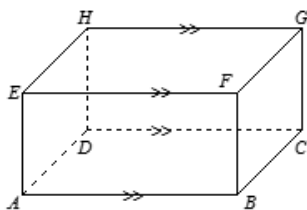
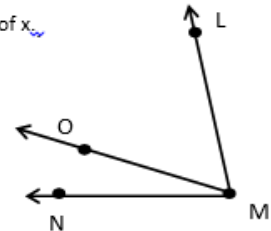
Fill in the information on the picture:



Solve for x

Use the given information to find the indicated angle measure.

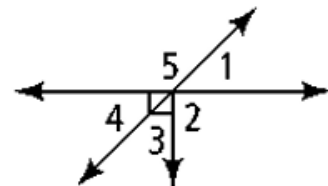
5. If $m\angle NMO = (5x - 40)^\circ$ and $m\angle LMO = 70^\circ$ and $m\angle LMN = 85^\circ$. Find the value of x.



6. Name 2 parallel lines. _____

7. Name 2 perpendicular lines. _____

8. Name 2 skew lines. _____



9. Name 2 supplementary angles. _____

10. Name 2 complementary angles. _____

11. Name 2 adjacent angles. _____

Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure

Right Side...

Write a summary that answers the essential question.

Left Side...

Draw a picture to explain the segment addition principle.

Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure Closure

EQ: How do I identify and explain basic Geometry vocabulary?

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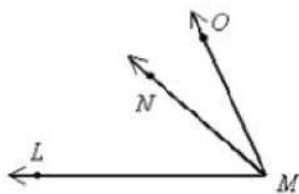
<p>Week 2, Lesson 2</p> <ol style="list-style-type: none"> 1. Warm Up 2. Left-Side Review 3. G.CO.1 Quiz 4. Closure 	<p>14</p>	<p>Geometric Vocabulary</p>	<p>15</p>
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Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

****Have you turned in your Plan for Success, yet??****

Warm Up:

1. $m\angle OMN = x^2 + 6x + 9$ and $m\angle LMN = (6x - 7)^\circ$ and $m\angle OML = 66^\circ$. Find $m\angle OMN$ and $m\angle LMN$.



2. In the figure above, which of the following statements apply? (There may be more than one answer.)
 - (a) The two angles are complementary.
 - (b) The two angles are supplementary.
 - (c) The two angles are adjacent.
 - (d) The two angles form a linear pair.
 - (e) The two angles are vertical angles.
 - (f) None of the statements apply.

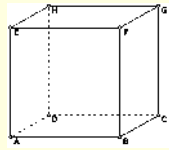
<http://www.phoenixuni>



Left-Side Review!

Name a set of segments that are:

- parallel to each other
- perpendicular to each other
- skew to each other



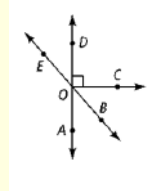
Can \overline{JK} be the same as \overline{KJ} ?

Can \overrightarrow{JK} be the same as \overrightarrow{KJ} ?

Can \overleftrightarrow{JK} be the same as \overleftrightarrow{KJ} ?

Name a pair of angles that are:

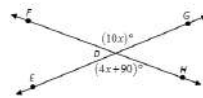
- adjacent
- complementary
- supplementary
- vertical
- linear pairs



Name a:

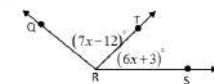
- right angle
- an acute angle
- an obtuse angle
- a straight angle

Use the diagram to find $m\angle FDG$.



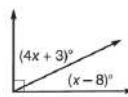
*What is the relationship between these two angles?

If $m\angle QRS = 147^\circ$, what is the $m\angle TRS$?



*Classify the relationship between these two angles.

Find the value of x .



*Classify the relationship between these two angles.

If $AC = 64$, then find the value of x and the length of AB and BC .



*What is the relationship between B and AC?

G.CO.1 Quiz

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Choice Board- Intro to Geometry Unit

5pt	1) Draw the symbols for a line, a ray and a line segment.	2) Draw and label a line segment, JK, that is 1.5 inches long. Use a ruler to draw and label the midpoint M of the segment.	3) Draw an acute angle, then bisect it using a compass.
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10 pts

20 pts

50 pts

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EQ: G.CO.12 How do I perform basic geometric constructions?

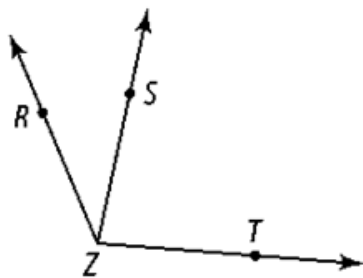
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<p>Week 2, Lesson 3</p> <ol style="list-style-type: none"> 1. Warm Up 2. Notes: Constructions 3. Independent Practice 4. Closure <p style="font-size: 2em; font-weight: bold;">16</p>	<p style="color: red; text-align: center;">Constructions</p> <div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> 17 </div>
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Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

Warm Up:

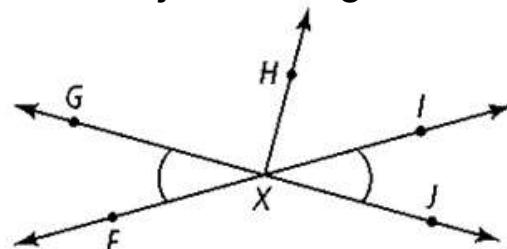
1. If $m\angle RZT = 110$, $m\angle RZS = 3s$, and $m\angle TZS = 8s$, what are $m\angle RZS$ and $m\angle TZS$?



2. In the picture below, identify each of the following:

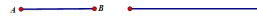
- two vertical angles
- a linear pair

- two adjacent angles



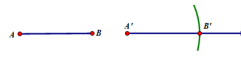
(1) Copying a segment (Constructing a congruent segment)

(a) Draw a segment on your paper.



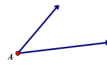
(b) Using your compass, place the pointer at Point A and extend it until it reaches Point B. Your compass now has the measure of AB.

(c) Place your pointer at A', and then create the arc using your compass. The intersection is the same radii, thus the same distance as AB. You have copied the length AB.

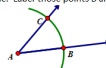


(2) Copy an angle (Constructing a congruent angle)

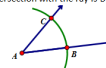
(a) Given an angle and a ray.



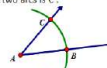
(b) Create an arc of any size, such that it intersects both rays of the angle. Label those points B and C.



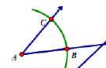
(c) Create the same arc by placing your pointer at A'. The intersection with the ray is B'.



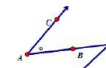
(d) Place your compass at point B and measure the distance from B to C. Use that distance to make an arc from B'. The intersection of the two arcs is C'.



(e) Draw the ray A'C'.



(f) The angle has been copied.

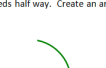


(3) Bisect a segment (Method 1)

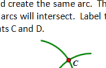
(a) Given \overline{AB}



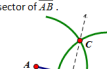
(b) Place your pointer at A, extend your compass so that the distance exceeds half way. Create an arc.



(c) Without changing your compass measurement, place your pointer at B and create the same arc. The two arcs will intersect. Label those points C and D.



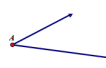
(d) Place your straightedge on the paper so that it forms \overline{CD} . The intersection of \overline{CD} and \overline{AB} is the bisector of \overline{AB} .



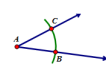
*What is the relationship between point M and AB?

Bisect an angle (Method 1)

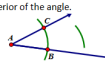
Given an angle.



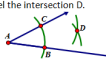
(b) Create an arc of any size, such that it intersects both rays of the angle. Label those points B and C.



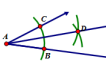
(c) Leaving the compass the same measurement, place your pointer on point B and create an arc in the interior of the angle.



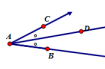
Do the same as step (c) but using your pointer at point C. Let the intersection be D.



(e) Create \overline{AD} . \overline{AD} is the angle bisector.



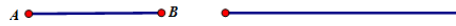
(f) \overline{AD} is the angle bisector.



Summary:

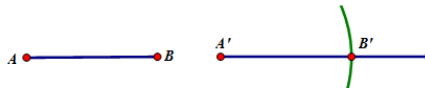
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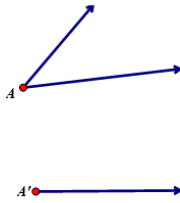
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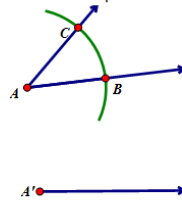


(2) Copy an angle (Constructing a congruent angle)

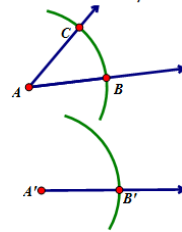
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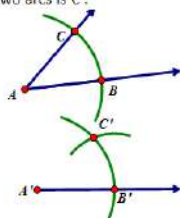
(b) Create an arc of any size, such that it intersects both rays of the angle. Label those points B and C.



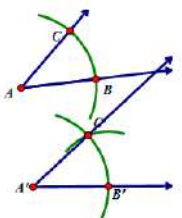
(c) Create the same arc by placing your pointer at A'. The intersection with the ray is B'.



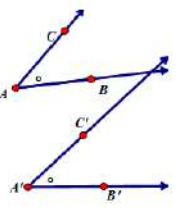
(d) Place your compass at point B and measure the distance from B to C. Use that distance to make an arc from B'. The intersection of the two arcs is C'.



(e) Draw the ray A'C'.



(f) The angle has been copied.

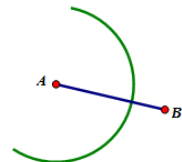


(3) Bisect a segment (Method 1)

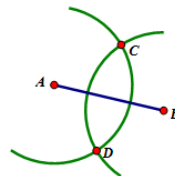
(a) Given \overline{AB}



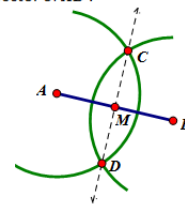
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(c) Without changing your compass measurement, place your point at B and create the same arc. The two arcs will intersect. Label those points C and D.



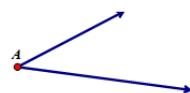
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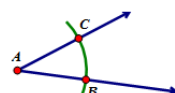
*What is the relationship between point M and AB?

(4) Bisect an angle (Method 1)

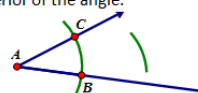
(a) Given an angle.



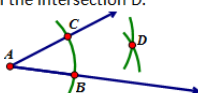
(b) Create an arc of any size, such that it intersects both rays of the angle. Label those points B and C.



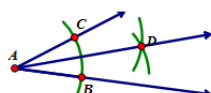
(c) Leaving the compass the same measurement, place your pointer on point B and create an arc in the interior of the angle.



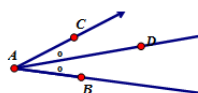
(d) Do the same as step (c) but placing your pointer at point C. Label the intersection D.



(e) Create \overline{AD} . \overline{AD} is the angle bisector.



(f) \overline{AD} is the angle bisector.



ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity ICA: In Class Activity

Name _____

pd _____

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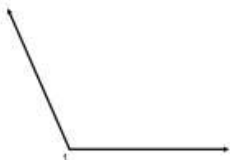
G.CO.12 Practice

1. Construct \overline{AB} congruent to \overline{XY} .

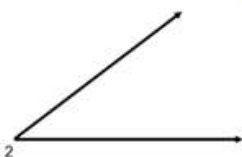
Your construction:



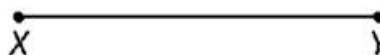
2. Construct an angle congruent to $\angle 1$.



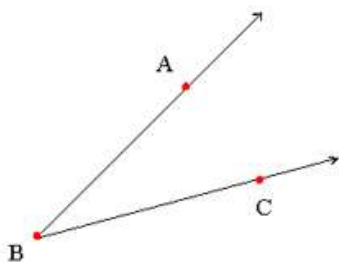
3. Construct an angle congruent to $\angle 2$.



4. Construct the perpendicular bisector of \overline{XY} .



5. Construct the angle bisectors for the following two angles



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Right Side...

Write a summary that answers the essential question.

Left Side...

Which do you prefer: the Compass method of the Paper-Folding method for constructions? Why?

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EQ: GPE.4 How do I calculate distance, midpoint, and slopes?

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question



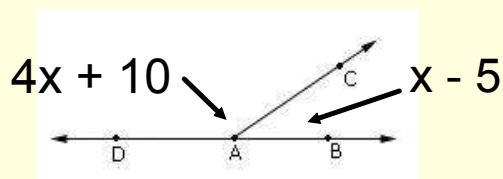
Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

Warm Up:

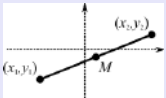
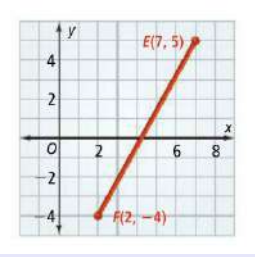
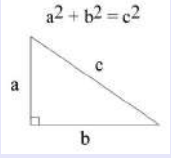
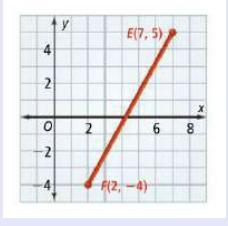
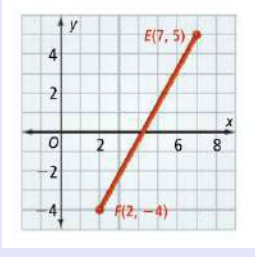
Using a straight-edge, draw an obtuse angle. Then...

1. Construct a copy of the angle
2. Construct the bisector of your original angle.

3. Given the diagram at the right, what is the value of x ?
4. Classify the relationship between these two angles.



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<p>Midpoint Formula</p>	$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$  <p>Example 1</p> 
<p>Distance Formula</p>	$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ $a^2 + b^2 = c^2$  <p>Example 2</p> 
<p>Slope Formula</p>	<p>The steepness of a line</p> $m = \frac{y_2 - y_1}{x_2 - x_1}$ <p>Example 3</p> 

Summary:

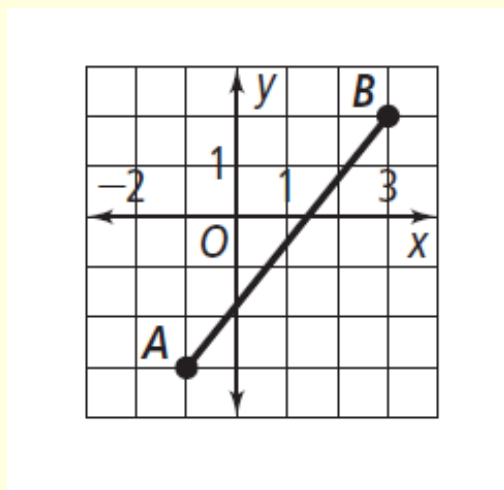
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Left-Side Practice

Calculate the midpoint of the following segment.

Calculate the distance of the following segment.

Calculate the slope of the following segment.



One endpoint of a segment is $(3, -7)$. The mid point is of the segment is the origin. Find the other endpoint.

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ROTATION

(Please write all of your answers on the
LEFT-SIDE of your IAN)

A (1, 4)

E (3, 9)

J (6, 2)

B (-5, 6)

F (-2, 13)

K (-4, -7)

C (2, 6)

G (7, -3)

L (2, -2)

D (-3, 2)

H (-1, -6)

M (-7, -4)

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Right Side...

Write a summary that answers the essential question.

Left Side...

Which of the following is the easiest, do you think? Why?

- calculating the distance between two points
- calculating the midpoint between two points
- calculating the slope of a line

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EQ: G.CO.1 What are the principles of segment and angle addition?

Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question Essential Question

Week 2, Wednesday

(pds 6 & 7)

1. Warm Up
2. Extra Practice

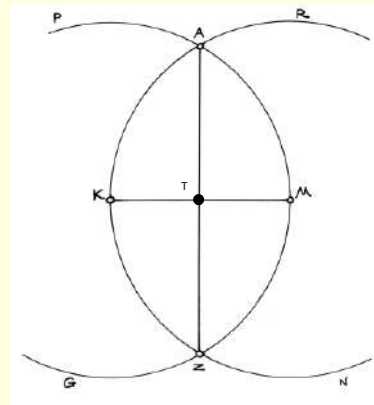
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11

Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up Warm-up

Warm Up:

1. Which construction is shown at the right?



2.

\overline{BD} bisects $\angle ABC$.

1) Draw a picture and label all parts.

2) If $m\angle ABD = 5x$ and $m\angle DBC = 3x + 10$,

find the value of x and the measure of $\angle ABC$

Sketch each figure.

54. \overline{GH}

55. \overline{CD}

56. \overline{AB}

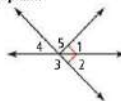
57. acute $\angle ABC$

58. right $\angle PST$

59. straight $\angle XYZ$

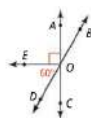
Use the diagram at the right. Is each statement true? Explain.

- 7. $\angle 1$ and $\angle 5$ are adjacent angles.
- 8. $\angle 3$ and $\angle 5$ are vertical angles.
- 9. $\angle 3$ and $\angle 4$ are complementary.
- 10. $\angle 1$ and $\angle 2$ are supplementary.

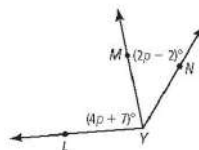


Name an angle or angles in the diagram described by each of the following.

- 11. supplementary to $\angle AOD$
- 12. adjacent and congruent to $\angle AOE$
- 13. supplementary to $\angle EOA$
- 14. complementary to $\angle EOD$
- 15. a pair of vertical angles



If $m\angle LYN = 125$, what are $m\angle LYM$ and $m\angle MTN$?



C is the midpoint of \overline{BE} . If $BC = t + 1$, and $CE = 15 - t$, what is BE ?



- Draw an obtuse angle. Name it TOU.
- Construct a copy of your angle.
- Construct the angle bisector of the angle you copied.

- Draw a segment. Label it CV.
- Draw a copy of the segment.
- Draw the perpendicular bisector of the segment you copied.