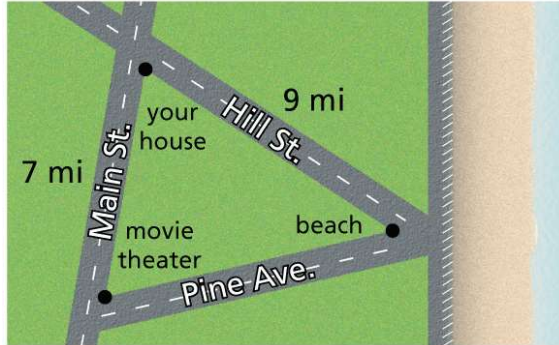


2023 - 2024 Geometry MYA Review

1. Describe the possible lengths of Pine Avenue.

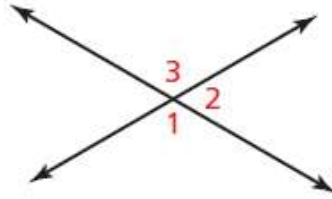


Pine Avenue must be longer than  miles and shorter than  miles.

2. Complete the two-column proof of the Vertical Angles Congruence Theorem.

**Given**  $\angle 1$  and  $\angle 3$  are vertical angles.

**Prove**  $\angle 1 \cong \angle 3$



STATEMENTS	REASONS
1. $\angle 1$ and $\angle 3$ are vertical angles.	1. Given
2. $\angle 1$ and $\angle 2$ are a linear pair. $\angle 2$ and $\angle 3$ are a linear pair.	2. Definition of linear pair, as shown in the diagram.
3. <span style="border: 1px dashed black; display: inline-block; width: 150px; height: 20px; vertical-align: middle;"></span>	3. Linear Pair Postulate
4. $\angle 1 \cong \angle 3$	4. <span style="border: 1px dashed black; display: inline-block; width: 150px; height: 20px; vertical-align: middle;"></span>

⚡  $\angle 1$  and  $\angle 2$  are right angles.

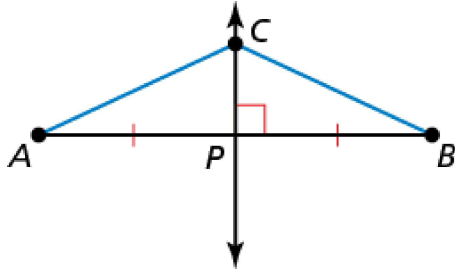
⚡ Symmetric Property of Angle Congruence

⚡ Congruent Supplements Theorem

$\angle 1$  and  $\angle 2$  are supplementary.  
⚡  $\angle 2$  and  $\angle 3$  are supplementary.

3. **Given**  $\overleftrightarrow{CP}$  is the perpendicular bisector of  $\overline{AB}$ .

**Prove**  $CA = CB$



**Paragraph Proof** Because  $\overleftrightarrow{CP}$  is the perpendicular bisector of  $\overline{AB}$ ,  $\overleftrightarrow{CP}$  is perpendicular to  $\overline{AB}$  and point  $P$  is the midpoint of  $\overline{AB}$ . By the

,  $AP = BP$ , and by the

,  $m\angle CPA = m\angle CPB = 90^\circ$ . Then by

the definition of segment congruence,  $\overline{AP} \cong \overline{BP}$ , and by the definition of angle congruence,

$\angle CPA \cong \angle CPB$ . By the ,  $\overline{CP} \cong \overline{CP}$ .

So,  $\triangle CPA \cong \triangle CPB$  by the SAS Congruence Theorem, and  $\overline{CA} \cong \overline{CB}$  because

corresponding parts of congruent triangles are congruent. So,  $CA = CB$  by the definition of segment congruence.

⚡ Perpendicular Postulate

⚡ Ruler Postulate

⚡ Reflexive Property of Segment Congruence

⚡ definition of midpoint

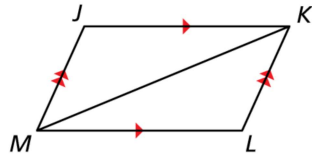
⚡ Symmetric Property of Segment Congruence

⚡ definition of perpendicular lines

4. Complete the proof.

**Given:**  $\overline{JK} \parallel \overline{ML}$ ,  $\overline{MJ} \parallel \overline{KL}$

**Prove:**  $\triangle MJK \cong \triangle KLM$



Statements	Reasons
$\overline{JK} \parallel \overline{ML}$ , $\overline{MJ} \parallel \overline{KL}$	Given
$\overline{MK} \cong \overline{KM}$	<input type="text"/>
$\angle JKM \cong \angle LMK$ , $\angle JMK \cong \angle LKM$	<input type="text"/>
$\triangle MJK \cong \triangle KLM$	<input type="text"/>

⌘ SSS Congruence Theorem

⌘ ASA Congruence Theorem

⌘ Alternate Interior Angles Theorem

⌘ Transitive Property of Congruence

⌘ SAS Congruence Theorem

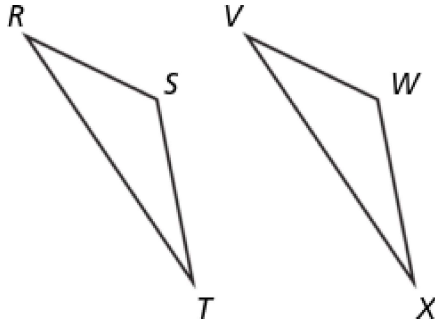
⌘ HL Congruence Theorem

⌘ Reflexive Property of Congruence

⌘ Symmetrical Property of Congruence

⌘ Triangle Sum Theorem

5. Identify the third congruence statement that is needed to prove that  $\triangle RST \cong \triangle VWX$  using the ASA Congruence Theorem.



$$\overline{RT} \cong \overline{VX}, \angle T \cong \angle X, \underline{\hspace{2cm}}$$

- $\overline{RS} \cong \overline{VW}$   
  $\angle S \cong \angle W$   
  $\overline{ST} \cong \overline{WX}$   
  $\angle R \cong \angle V$

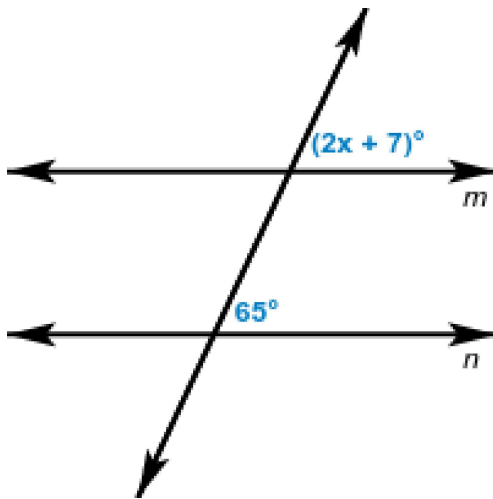
Geometry: 2022>Chapter 2>Chapter 2: End Quiz> Question #2

6. The endpoints of  $\overline{AB}$  are  $A(5, 8)$  and  $B(1, -4)$ . Find the coordinates of the midpoint  $M$ .

The coordinates of the midpoint  $M$  are  $(\square, \square)$ .

Geometry: 2022>Chapter 1>Chapter 1: Mid Quiz> Question #3

7. Find the value of  $x$  that makes  $m \parallel n$ .



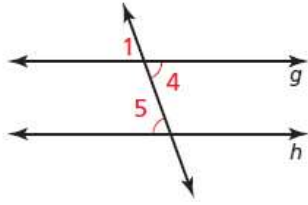
Lines  $m$  and  $n$  are parallel when  $x = \square$ .

Geometry: FL 2023>Geometry Form H Session 1 EOC Test

8. Complete the two-column proof of the Alternate Interior Angles Converse.

**Given**  $\angle 4 \cong \angle 5$

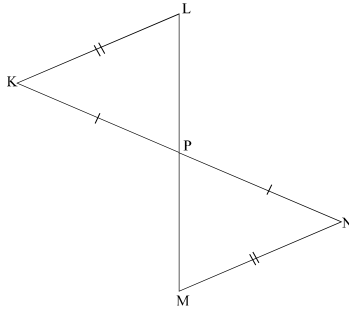
**Prove**  $g \parallel h$



STATEMENTS	REASONS
1. $\angle 4 \cong \angle 5$	1. Given
2. $\angle 1 \cong \angle 4$	2. [Dashed box for reason]
3. $\angle 1 \cong \angle 5$	3. Transitive Property of Congruence
4. $g \parallel h$	4. [Dashed box for reason]

9. Given:  $\overline{KP} \cong \overline{NP}$ ,  $\overline{KL} \cong \overline{NM}$ ,  
 $P$  is the midpoint of  $\overline{LM}$ .

Prove:  $\triangle KLP \cong \triangle NMP$



STATEMENTS	REASONS
1. $\overline{KP} \cong \overline{NP}$ and $\overline{KL} \cong \overline{NM}$ .	1. Given
2. $P$ is the midpoint of $\overline{LM}$	2. Given
3. $\overline{LP} \cong \overline{MP}$	3. <div style="border: 1px dashed black; height: 20px; width: 100%;"></div>
4. $\triangle KLP \cong \triangle NMP$	4. <div style="border: 1px dashed black; height: 20px; width: 100%;"></div>

Corresponding parts of congruent triangles  
are congruent

Definition of a midpoint

Definition of Angle Bisector

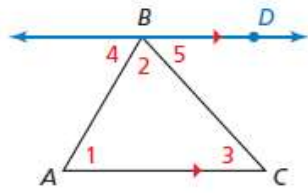
SAS Congruence Theorem

SSS Congruence Theorem

Substitution Property of Equality

Transitive Property of Equality

10. Complete the two-column proof of the Triangle Sum Theorem.



**Given:**  $\triangle ABC$

**Prove:**

$$m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ$$



STATEMENTS	REASONS
<p>1.</p> <div style="border: 1px dashed black; height: 30px; width: 100%;"></div>	<p>1. Parallel Postulate</p>
<p>2.</p> <div style="border: 1px dashed black; height: 30px; width: 100%;"></div>	<p>2. Angle Addition Postulate and definition of straight angle</p>
<p>3. <math>\angle 1 \cong \angle 4</math>, <math>\angle 3 \cong \angle 5</math></p>	<p>3. Alternate Interior Angles Theorem</p>
<p>4. <math>m\angle 1 = m\angle 4</math>, <math>m\angle 3 = m\angle 5</math></p>	<p>4. Definition of congruent angles</p>
<p>5. <math>m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ</math></p>	<p>5. Substitution Property of Equality</p>



$$\bullet\bullet m\angle 4 + m\angle 2 + m\angle 5 = 180^\circ$$

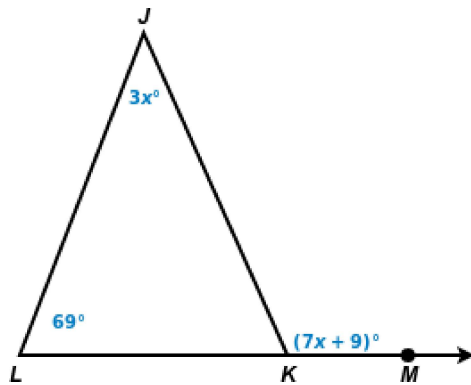
$\bullet\bullet$  Draw  $\overleftrightarrow{BD}$  parallel to  $\overline{AC}$ .

$$\bullet\bullet \angle 1 \cong \angle 5, \angle 3 \cong \angle 4$$

$$\bullet\bullet m\angle 1 + m\angle 4 = m\angle 3 + m\angle 5$$

Geometry: FL 2023>Geometry Form H Session 2 EOC Test

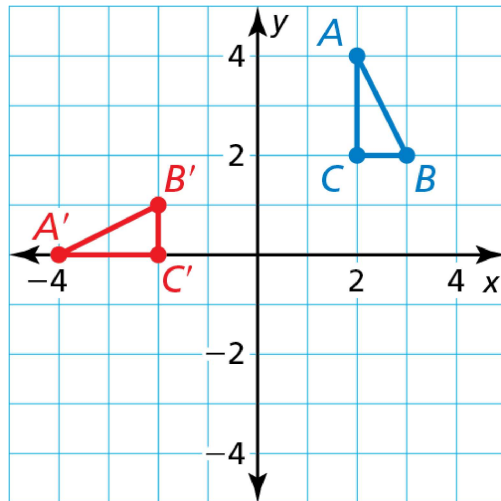
11.  $\triangle JLK$  lies on  $\overrightarrow{LM}$ . Find the measure of  $\angle JKM$ .



The  $m\angle JKM$  is °.

Geometry: FL 2023>Geometry Form B Session 2 EOC Test> Question #5

12. Describe a transformation that maps the blue figure,  $\triangle ABC$ , to the red figure,  $\triangle A'B'C'$ .



One possible transformation is a  followed by a

.

Geometry: FL 2023>Geometry Form J Session 2 EOC Test

13. Find the coordinates of point  $P$  along the directed line segment  $AB$  so that  $AP$  to  $PB$  is the given ratio.

$$A(-7, -5), B(-2, 0); 1 \text{ to } 4$$

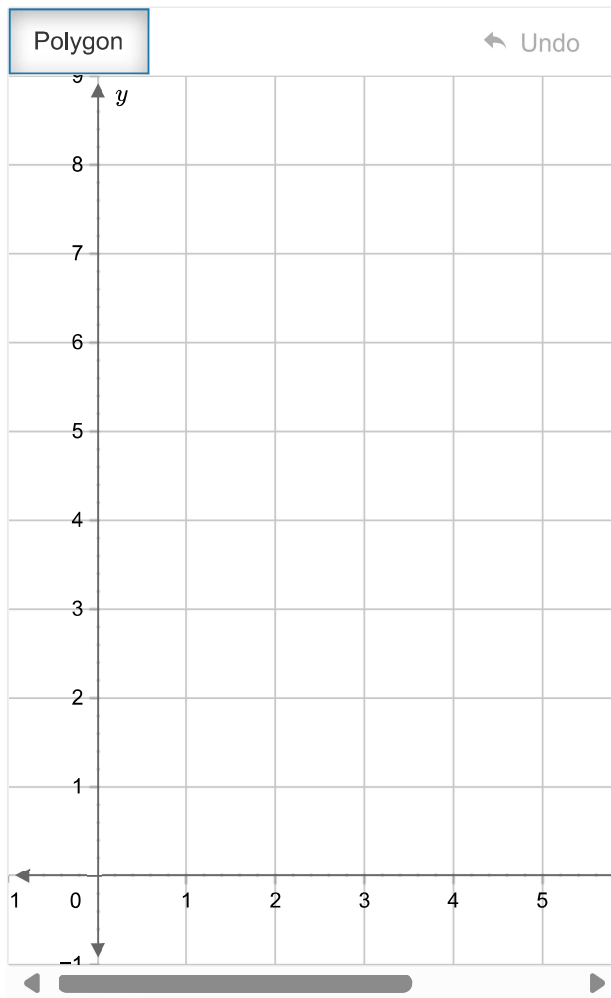
The coordinates of  $P$  are  $(\square, \square)$ .

Geometry: FL 2023>Geometry Form F Session 2 EOC Test

14. A dog park is being built near your school. The four vertices of the dog park can be represented on the coordinate plane at the following points:

$$(0, 0), (6, 0), (6, 4), (3, 4)$$

**Part A:** Connect the four vertices of the dog park on the coordinate grid to show the shape of the park.



**Part B:** Each square unit on the coordinate grid measures 10 yards by 10 yards.

What is the **perimeter** of the dog park?

yards

Geometry: FL 2023>Geometry Form F Session 1 EOC Test

15. You design a tree house using a coordinate plane in which the coordinates are measured in meters ( $m$ ). The vertices of the rectangular floor are  $(0, 5)$ ,  $(4, 3)$ ,  $(4, 13)$ , and  $(8, 11)$ .

**Part A:** What is the perimeter of the tree house floor?

$m$

**Part B:** What is the area of the tree house floor?

$m^2$

Geometry: FL 2023>Geometry Form J Session 1 EOC Test

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16. Select the counterexample that shows that the conjecture is false.

**Conjecture:** If line  $l$  intersects  $\overline{AB}$  at point  $P$ , then line  $l$  is the segment bisector of  $\overline{AB}$ .

- If line  $l$  intersects  $\overline{AB}$  at the midpoint, it is the perpendicular bisector of  $\overline{AB}$ .
- If another line intersects  $\overline{AB}$ , then line  $l$  is not the only segment bisector of  $\overline{AB}$ .
- If line  $l$  intersects  $\overline{AB}$  at a right angle, then it must be the segment bisector of  $\overline{AB}$ .
- If line  $l$  intersects  $\overline{AB}$  anywhere besides the midpoint, it is not the segment bisector of  $\overline{AB}$ .

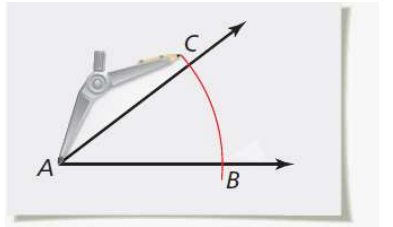
Geometry: FL 2023>Geometry Item Samples Test> Question #2

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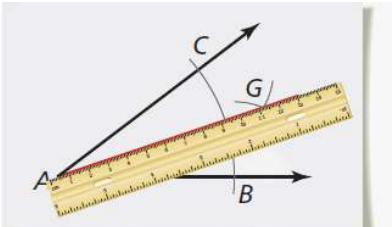
17. Order the steps to construct an angle bisector of  $\angle A$  with a compass and straightedge.

Step 1	●—●	
Step 2	●—●	
Step 3	●—●	

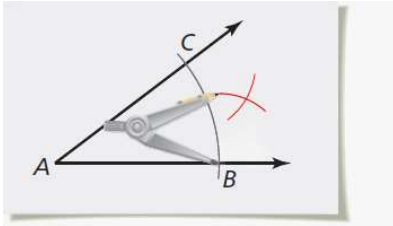
  



⌘ **Draw an arc** Place the compass at  $A$ . Draw an arc that intersects both sides of the angle. Label the intersections  $B$  and  $C$ .



⌘ **Draw a ray** Label the intersection  $G$ . Use a straightedge to draw a ray through  $A$  and  $G$ .



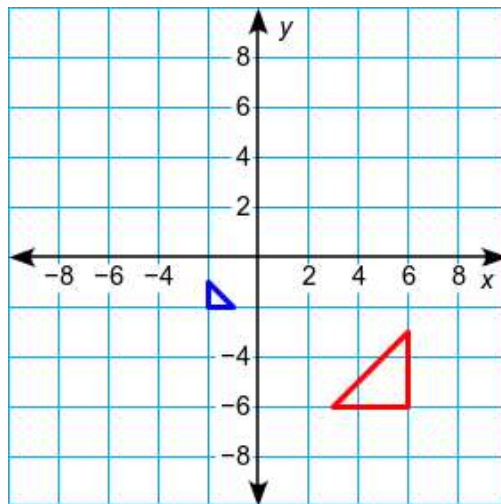
⌘ **Draw arcs** Place the compass at  $C$ . Draw an arc. Then place the compass point at  $B$ . Using the same radius, draw another arc.

18. Find the coordinates of point  $P$  along the directed line segment  $AB$  so that  $AP$  to  $PB$  is the given ratio.

$$A(4, 5), B(12, 9); 3 \text{ to } 1$$

The coordinates of  $P$  are (  ,  ).

19. Describe a similarity transformation that maps the blue figure to the red figure.



One possible similarity transformation is a reflection in the -axis followed by a

dilation centered at the origin with a scale factor of .

2

3

4

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{4}$

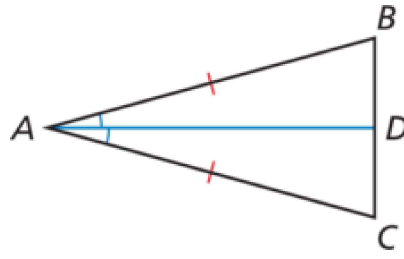
$x$

$y$

20. Complete the two-column proof of the Base Angles Theorem.

Given  $\overline{AB} \cong \overline{AC}$

Prove  $\angle B \cong \angle C$



STATEMENTS	REASONS
1. Draw $\overline{AD}$ , the angle bisector of $\angle CAB$ .	1. Construction of angle bisector
2. $\angle CAD \cong \angle BAD$	2. <input type="text"/>
3. $\overline{AB} \cong \overline{AC}$	3. Given
4. $\overline{DA} \cong \overline{DA}$	4. Reflexive Property of Congruence
5. <input type="text"/>	5. SAS Congruence Theorem
6. $\angle B \cong \angle C$	6. Corresponding parts of congruent triangles are congruent.

⚡ Definition of angle bisector

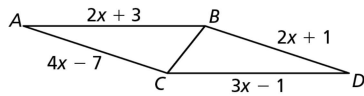
⚡  $\overline{DB} \cong \overline{DC}$

⚡ Transitive Property of Congruence

⚡  $\triangle ADB \cong \triangle ADC$

Geometry: 2022>Chapter 5>Chapter 5: Mid Quiz> Question #4

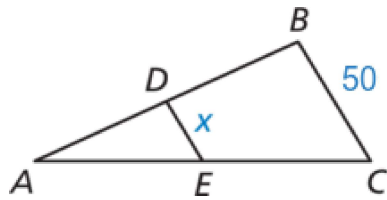
21. Find all values of  $x$  that make the triangles congruent.



$x = \square$

Geometry: FL 2023>Chapter 5>Chapter 5: Chapter Test (1 - 11)

22.  $\overline{DE}$  is a midsegment of  $\triangle ABC$ . Find the value of  $x$ .



$x = \square$

Geometry: 2022>Chapter 6>Chapter 6: End Quiz> Question #1

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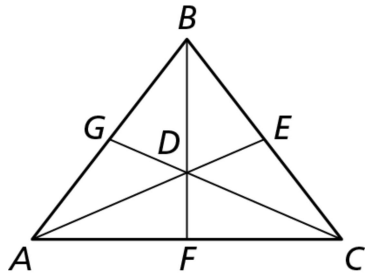
23. Find the coordinates of the centroid of  $\triangle RST$  with vertices  $R(-5, -9)$ ,  $S(6, -3)$ , and  $T(-1, 6)$ .

The coordinates of the centroid are  $(\square, \square)$ .

Geometry: 2022>Chapter 6>Chapter 6: Mid Quiz> Question #2

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24. Point  $D$  is the centroid of  $\triangle ABC$ ,  $BD = 5x + 2$ , and  $DF = 3x$ . Find the value of  $x$ .



$x = \square$

Geometry: 2022>Chapter 6>Chapter 6: Mid Quiz> Question #5

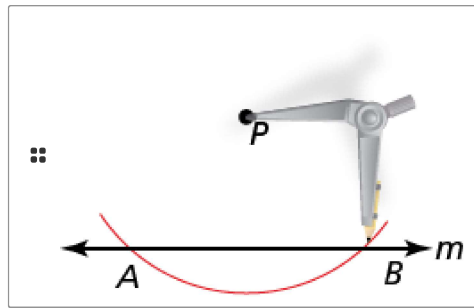
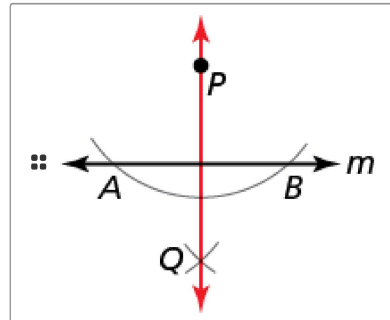
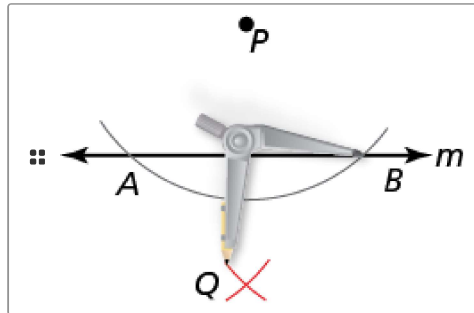
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25. Place the steps for constructing a line perpendicular to line  $m$  through point  $P$  in the correct order.

$P$  •

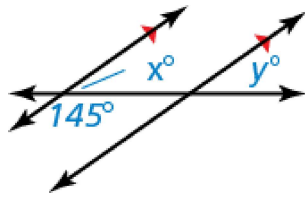


Step 1	
Step 2	
Step 3	





26. Find the value of  $x$  and  $y$ .



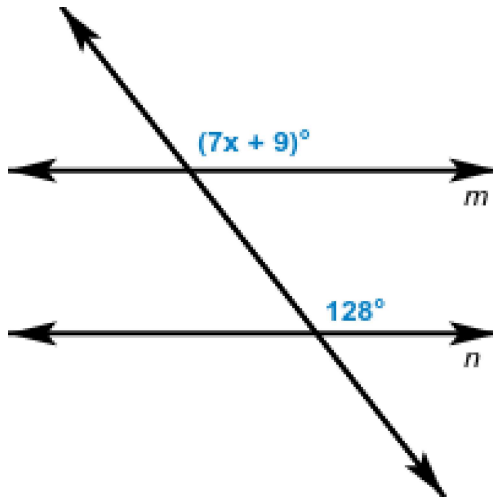
$$x = \square$$

$$y = \square$$

Geometry: FL 2023>Geometry MOY Items> Question #23

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27. Find the value of  $x$  that makes  $m \parallel n$ .



Lines  $m$  and  $n$  are parallel when  $x = \square$ .

Geometry: FL 2023>Geometry MOY Items> Question #33

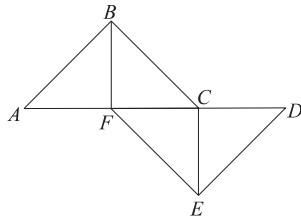
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28. Given:  $\overline{BF}$  is a perpendicular bisector of  $\overline{AC}$ ,

$\overline{EC}$  is a perpendicular bisector of  $\overline{DF}$ ,

$$\overline{BF} \cong \overline{EC}.$$

Prove:  $\triangle DCE \cong \triangle AFB$



**STATEMENTS** .....

**REASONS**

1.  $\overline{BF}$  is a perpendicular bisector of  $\overline{AC}$ ,  $\overline{EC}$  is a perpendicular bisector of  $\overline{DF}$ .

1. Given

2.  $\overline{BF} \cong \overline{EC}$

2. Given

3.  $\overline{AF} \cong \overline{FC}$

3.



4. Definition of Perpendicular Bisector

4.  $\overline{CD} \cong \overline{FC}$

5.



5.  $\overline{AF} \cong \overline{CD}$

6.  $\angle BFA \cong \angle ECF$

6. Definition of a Right Angle

7.  $\triangle DCE \cong \triangle AFB$

7.



Reflexive Property of Congruence

Substitution Property of Equality

SSS Congruence Theorem

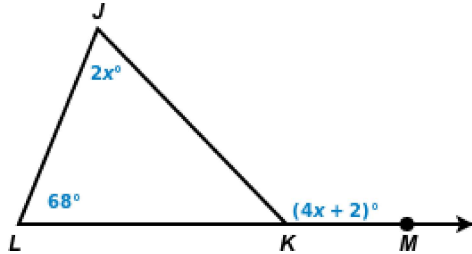
SAS Congruence Theorem

Definition of Perpendicular Bisector

Transitive Property of Congruence

Geometry: FL 2023>Geometry MOY Items> Question #36

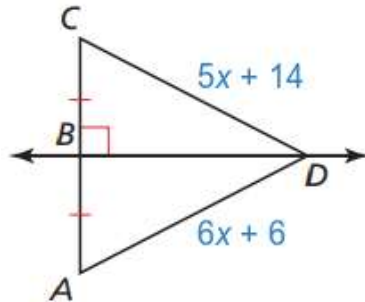
29.  $\triangle JLK$  lies on  $\overrightarrow{LM}$ . Find the measure of  $\angle JKM$ .



The  $m\angle JKM$  is °.

Geometry: FL 2023>Geometry MOY Items> Question #37

30. Find  $AD$ .



$AD =$

Geometry: FL 2023>Geometry MOY Items> Question #43

31. Triangle  $ABC$  with vertices  $A(5, 2)$ ,  $B(-4, 4)$ , and  $C(3, 7)$  is translated to the left 3 units. What are the coordinates of the vertices of triangle  $A'B'C'$  after the translation?

$A'$  is (, )

$B'$  is (, )

$C'$  is (, )

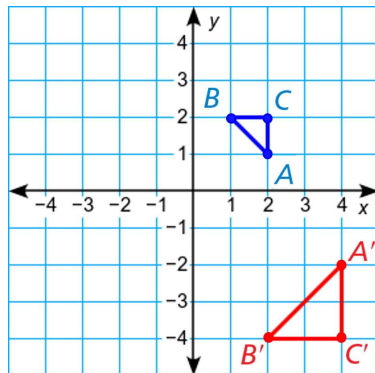
Geometry: FL 2023>Geometry MOY Items> Question #46

32. Identify whether each transformation of a polygon preserves distance and/or angle measures.

	Yes, preserves distance	No, does not preserve distance	Yes, preserves angle measures	No, does not preserve angle measures
A clockwise rotation about the origin.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A dilation of $\frac{1}{4}$ .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A reflection in the $y$ -axis and dilation of $\frac{1}{2}$ .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A translation left 2 units and down 6 units.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Geometry: FL 2023>Geometry MOY Items> Question #48

33. Describe a similarity transformation that maps  $\triangle ABC$  to  $\triangle A'B'C'$ .

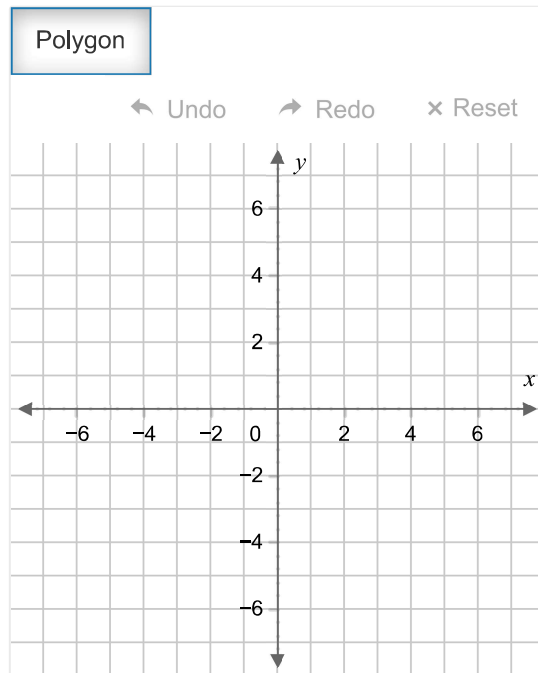


One possible similarity transformation is a reflection in the -axis followed by a dilation centered at the origin with a scale factor of .

$x$   
  $y$   
 2  
 3  
 4  
  $\frac{1}{2}$   
  $\frac{1}{3}$   
  $\frac{1}{4}$

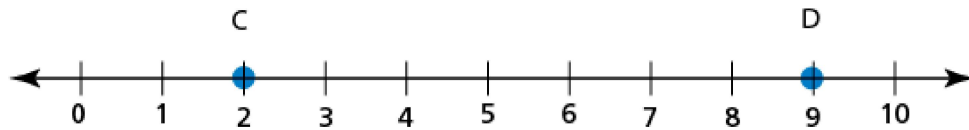
Geometry: FL 2023>Geometry MOY Items> Question #49

34. Graph  $\triangle ABC$  with vertices  $A(2, 3)$ ,  $B(2, 0)$ , and  $C(3, 2)$  and its image after a dilation centered at the origin with a scale factor of 2.



Geometry: FL 2023>Geometry MOY Items> Question #51

35. On the number line below point  $C$  has a weight of 0.67 and point  $D$  has a weight of 0.33. What is the weighted average of points  $C$  and  $D$ ?



Geometry: FL 2023>Geometry MOY Items> Question #56

36. On the number line, the coordinates of points  $A$  and  $B$  are 6 and 19 respectively. the the weight of  $A$  is 37% and the weight of  $B$  is 63%, what is the weighted average of points  $A$  and  $B$ ?

Geometry: FL 2023>Geometry MOY Items> Question #58

37. The coordinates of the midpoint of  $\overline{GH}$  are  $M\left(\frac{2}{5}, -8\right)$  and the coordinates of one endpoint are  $H\left(\frac{3}{8}, 10\right)$ .

The coordinates of the other endpoint are  $(\square, \square)$ .

Geometry: FL 2023>Geometry MOY Items> Question #68

38. Identify the converse, inverse, and contrapositive of the following conditional statement:

"If point  $M$  bisects  $\overline{AC}$ , then  $\overline{AM}$  is congruent to  $\overline{MC}$ ."

Converse	—	<input type="text"/>
Inverse	—	<input type="text"/>
Contrapositive	—	<input type="text"/>

If point $M$ bisects $\overline{AC}$ , then $\overline{AM}$ is congruent to $\overline{MC}$ .
If point $M$ does not bisect $\overline{AC}$ , then $\overline{AM}$ is not congruent to $\overline{MC}$ .
If $\overline{AM}$ is congruent to $\overline{MC}$ , then point $M$ bisects $\overline{AC}$ .
If $\overline{AM}$ is not congruent to $\overline{MC}$ , then point $M$ does not bisect $\overline{AC}$ .

Geometry: FL 2023>Geometry MOY Items> Question #108

39. Decide whether it is possible to construct a triangle with the given side lengths.

1 ft, 8 ft, 17 ft

- yes
- no

Geometry: 2022>Chapter 6>Chapter 6: End Quiz> Question #3

40. A manufacturer cuts a piece of metal for a microscope. The resulting piece of metal can be represented in a coordinate plane by a triangle with vertices  $A(0, 0)$ ,  $B(3, 8)$ , and  $C(6, 0)$ .

One unit in the coordinate plane represents one millimeter.

Prove that  $\triangle ABC$  is isosceles.

Find the exact length of each side.

$$AB = \square \text{ mm}$$

$$BC = \square \text{ mm}$$

$$AC = \square \text{ mm}$$

Because  $\square \cong \square$ ,  $\triangle ABC$  is isosceles.

$\overline{BC}$      $\overline{AC}$      $\overline{AB}$

Geometry: FL 2023>Chapter 5>Chapter 5: Chapter Test (1 - 11)

41. Find the area of  $\triangle ABC$  with vertices  $A(2, -3)$ ,  $B(4, -3)$ , and  $C(7, -12)$ .

The area of  $\triangle ABC$  is  $\square$  square units.

Geometry: 2022>Chapter 3>Course Benchmark 1>Question #5

42. In  $\triangle GHJ$ ,  $A$  is the midpoint of  $\overline{GH}$ ,  $\overline{CB}$  is a midsegment, and  $\overline{CB} \parallel \overline{GH}$ . What is  $GA$  when  $GH = 7x - 5$  and  $CB = 2x + 2$ ?

$$GA = \square$$

Geometry: 2022>Chapter 6>Chapter 6: Test>Question #12

43. The direct distance between city A and city B is 350 miles. The direct distance between city B and city C is 525 miles. Which could be the direct distance between city C and city A?
- 75 miles
  - 100 miles
  - 175 miles
  - 200 miles

Geometry: FL 2023>Chapter 6> Custom Question

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44. Given triangle  $ABC$  with vertices  $A(-4, 8)$ ,  $B(4, 2)$ , and  $C(-2, -6)$ . Select the statement that best describes triangle  $ABC$ .
- Triangle  $ABC$  is an acute scalene triangle.
  - Triangle  $ABC$  is an acute isosceles triangle.
  - Triangle  $ABC$  is a right scalene triangle.
  - Triangle  $ABC$  is a right isosceles triangle.

Geometry: FL 2023>Chapter 5> Custom Question

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45. Determine the inverse and the converse of the statement below.

*If two figures are congruent, then their corresponding angles are congruent.*

- Inverse: If two figures are not congruent, then their corresponding angles are not congruent.
- Converse: If the corresponding angles of two figures are not congruent, then the figures are not congruent.
- Inverse: If the corresponding angles of two figures are congruent, then the figures are not congruent.
- Converse: If two figures are not congruent, then their corresponding angles are not congruent.
- Inverse: If two figures are not congruent, then their corresponding angles are not congruent.
- Converse: If the corresponding angles of two figures are congruent, then then the figures are congruent.
- Inverse: If the corresponding angles of two figures are not congruent, then the figures are not congruent.
- Converse: If two figures are not congruent, then their corresponding angles are not congruent.