

4.3 ASA and AAS

NOTES

Triangle Congruence

ANGLE-SIDE-ANGLE

ANGLE-ANGLE-SIDE

ANGLE-SIDE-ANGLE	ANGLE-ANGLE-SIDE

Write your questions here!

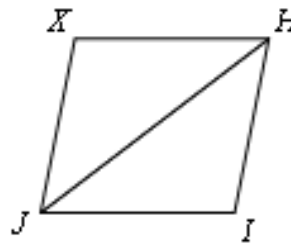


DOES ANGLE-SIDE-SIDE WORK?

State if the two triangles are congruent. If they are, state why.

PROVE IT!

Given: $\angle X \cong \angle I$
 $\overline{XJ} \parallel \overline{IH}$

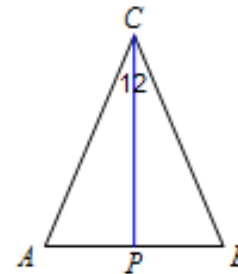


Prove: $\triangle JHI \cong \triangle HJX$

WHY ARE THE TWO TRIANGLES CONGRUENT? _____

STATEMENTS	REASONS
1. $\overline{XJ} \parallel \overline{IH}$ $\angle X \cong \angle I$	1.
2.	2.
3.	3.
4.	4.

Given: $\overline{AC} \cong \overline{BC}$
 \overline{CP} is perpendicular to \overline{AB}



Prove: $\triangle ACP \cong \triangle BCP$

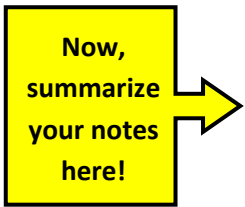
WHY ARE THE TWO TRIANGLES CONGRUENT? _____

STATEMENTS	REASONS
1. $\overline{AC} \cong \overline{BC}$ \overline{CP} is perpendicular to \overline{AB}	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

ISOSCELES TRIANGLES ARE COOL!

Corollary to Isosceles Triangle Theorem		
<p>Theorem If a triangle is equilateral, then,</p>	<p>If... $\overline{XY} \cong \overline{YZ} \cong \overline{ZX}$</p>	<p>Then...</p>
<p>Theorem If a triangle is equiangular, then,</p>	<p>If... $\angle X \cong \angle Y \cong \angle Z$</p>	<p>Then...</p>

SUMMARIZE YOUR NOTES

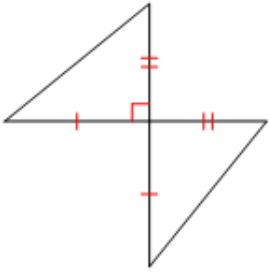


ALGEBRA REVIEW		
<p style="text-align: center;">SOLVE</p> $26 = -7 + 3x - 3(2x - 4)$	<p style="text-align: center;">GRAPH</p> $y = -\frac{x}{2}$ <div style="text-align: center;"> </div>	<p style="text-align: center;">MULTIPLY</p> $(2x - 3)(3x + 4)$
<p style="text-align: center;">SOLVE</p> $\frac{2x - 1}{6} = \frac{x + 2}{4}$	<p style="text-align: center;">GRAPH</p> $y = x$ <div style="text-align: center;"> </div>	<p style="text-align: center;">FACTOR</p> $x^2 - 12x + 36$

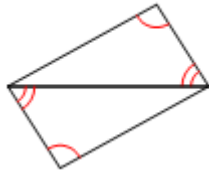
4.3 PRACTICE

State if the two triangles are congruent. If they are, state why.

1.



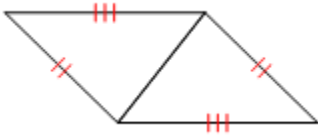
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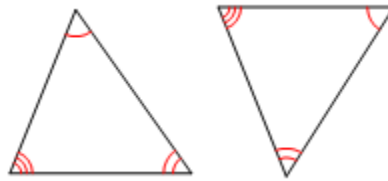
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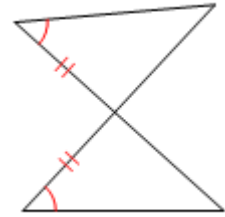
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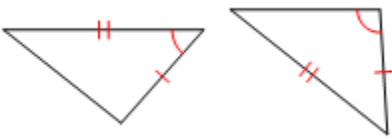
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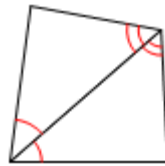
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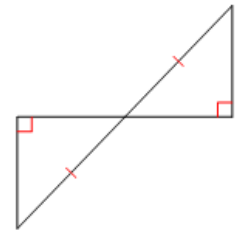
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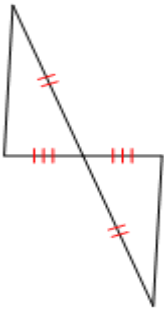
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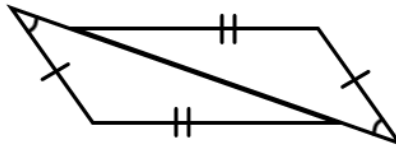
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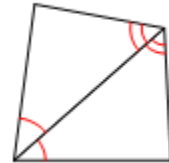
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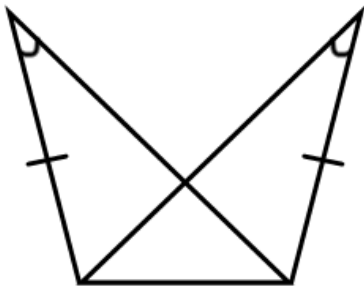
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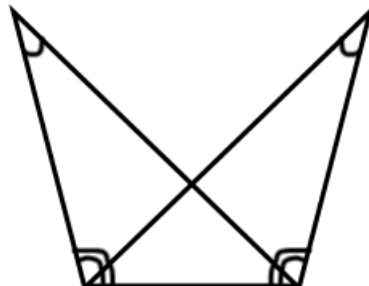
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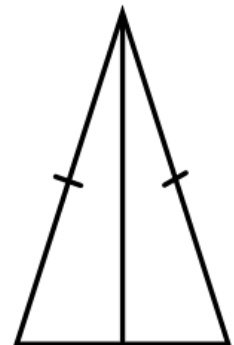
13.



14.



15.

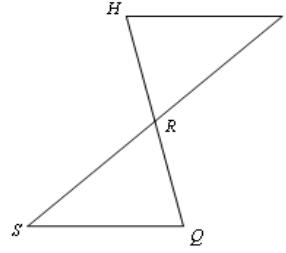


Mark the picture. Answer the question. Prove it.

16.

Given: R is the midpoint of \overline{SI}
 $\overline{HI} \parallel \overline{SQ}$

Prove: $\triangle RQS \cong \triangle RHI$



WHY ARE THE TWO TRIANGLES CONGRUENT? _____

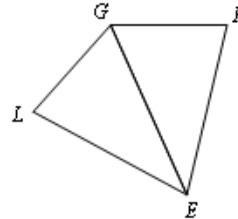
STATEMENTS	REASONS

Mark the picture. Answer the question. Prove it.

17.

Given: \overline{GE} is the angle bisector of $\angle LEF$
 $\angle L \cong \angle F$

Prove: $\triangle LEG \cong \triangle FEG$



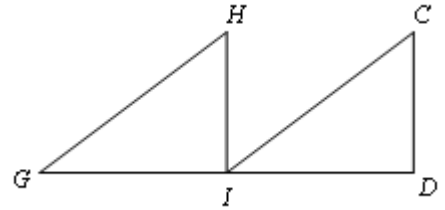
WHY ARE THE TWO TRIANGLES CONGRUENT? _____

STATEMENTS	REASONS

4.3 APPLICATION

1. Mark the picture, state why the two triangles are congruent, then prove it!

Given: $\angle HGI \cong \angle CID$
 $\angle CDI$ is a right angle
 \overline{HI} is the perpendicular bisector of \overline{GD}

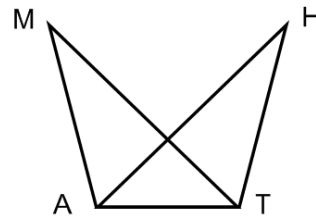


Prove: $\triangle HGI \cong \triangle CID$

STATEMENTS	REASONS

2. Mark the picture, state why the two triangles are congruent, then prove it!

Given: $\angle M \cong \angle H$
 $\angle MAT \cong \angle HTA$



Prove: $\triangle MAT \cong \triangle HTA$

STATEMENTS	REASONS