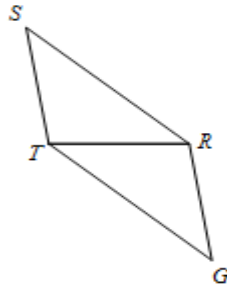


4.4 CPCTC and HL

NOTES

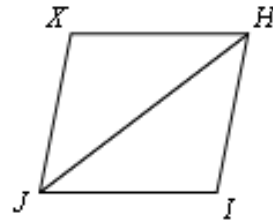
Corresponding Parts of Congruent Triangles are Congruent

$$\triangle RTS \cong \triangle TRG$$



$$\overline{SR} \cong ?$$

Given: $\overline{XJ} \cong \overline{HI}$
 $\overline{XJ} \parallel \overline{IH}$



Prove: $\overline{XH} \cong \overline{JI}$

WHY ARE THE TWO TRIANGLES CONGRUENT? _____

STATEMENTS	REASONS
1. $\overline{XJ} \parallel \overline{IH}$ $\overline{XJ} \cong \overline{HI}$	1.
2.	2.
3.	3.
4.	4.
5.	5.

TRIANGLE CONGRUENCE

Hypotenuse Leg

Write your questions here!

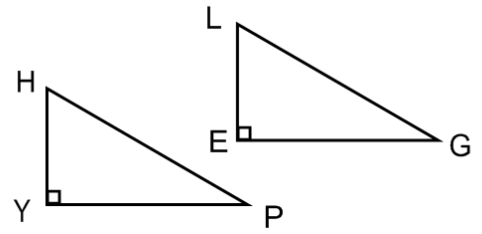


Given: $\angle HYP$ and $\angle LEG$ are right angles

$$\overline{HY} \cong \overline{EL}$$

$$\overline{HP} \cong \overline{LG}$$

Prove: $\triangle HYP \cong \triangle LEG$



WHY ARE THE TWO TRIANGLES CONGRUENT? _____

STATEMENTS	REASONS
1. $\angle HYP$ and $\angle LEG$ are right angles $\overline{HY} \cong \overline{EL}$ $\overline{HP} \cong \overline{LG}$	1.
2.	2.
3.	3.

SUMMARIZE YOUR NOTES

Now,
summarize
your notes
here!

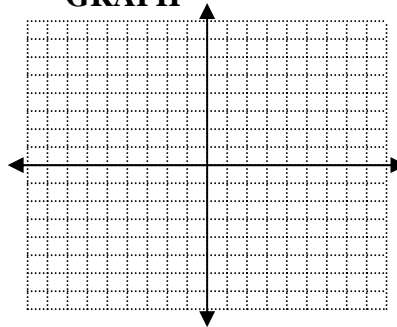
ALGEBRA REVIEW

SOLVE

$$26 = -7 + 3(2x - 4) - x$$

GRAPH

$$y = -\frac{3}{2}x$$



MULTIPLY

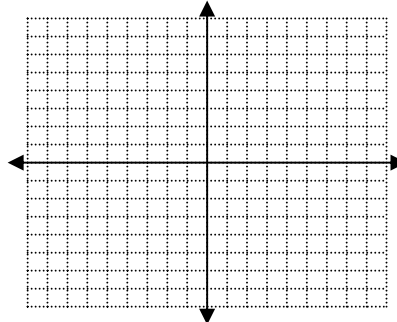
$$(2x - 1)(2x + 1)$$

SOLVE

$$\frac{5}{12} = \frac{-8}{x}$$

GRAPH

$$y = 1 - x$$



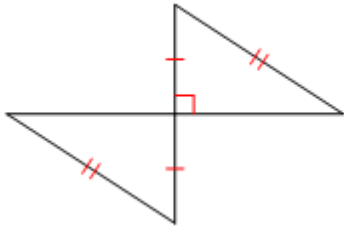
FACTOR

$$x^2 + 23x + 42$$

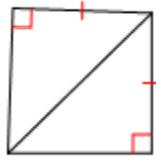
4.4 PRACTICE

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

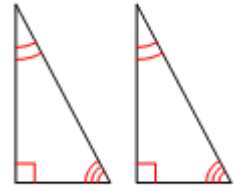
1.



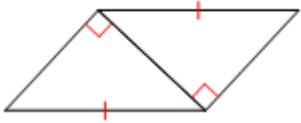
2.



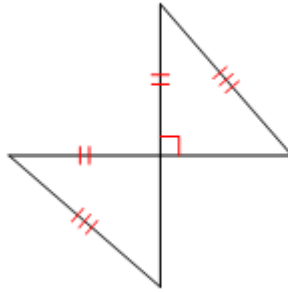
3.



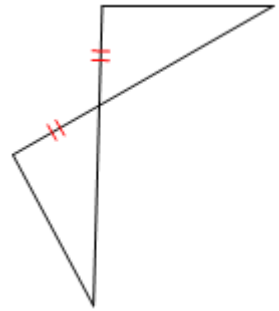
4.



5.



6.



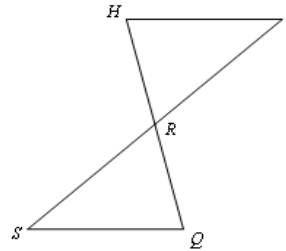
Mark the picture. Answer the question. Prove it.

7.

Given: R is the midpoint of \overline{SI}

$$\angle S \cong \angle I$$

Prove: $\angle Q \cong \angle H$



WHY ARE THE TWO TRIANGLES CONGRUENT? _____

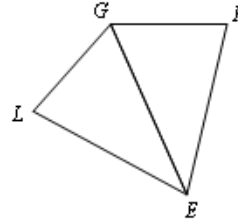
STATEMENTS	REASONS

Mark the picture. Answer the question. Prove it.

8.

Given: \overline{GE} is the angle bisector of $\angle LEF$
 $\overline{LE} \cong \overline{FE}$

Prove: $\overline{LG} \cong \overline{FG}$



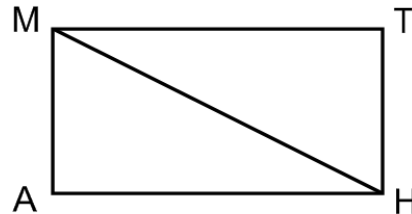
WHY ARE THE TWO TRIANGLES CONGRUENT? _____

STATEMENTS	REASONS

9.

Given: $\angle A$ and $\angle T$ are right angles
 $\overline{MA} \cong \overline{TH}$

Prove: $\angle MHA \cong \angle HMT$



WHY ARE THE TWO TRIANGLES CONGRUENT? _____

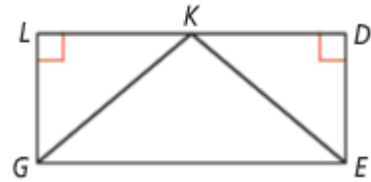
STATEMENTS	REASONS

4.4 APPLICATION

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

Given: $\triangle GKE$ is isosceles with base \overline{GE} ,
 $\angle L$ and $\angle D$ are right angles, and
 K is the midpoint of \overline{LD} .

Prove: $\overline{LG} \cong \overline{DE}$

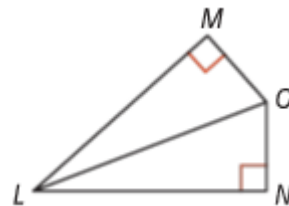


STATEMENTS	REASONS

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

Given: \overline{LO} bisects $\angle MLN$,
 $\overline{OM} \perp \overline{LM}$, $\overline{ON} \perp \overline{LN}$

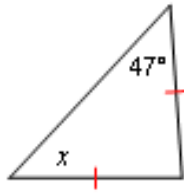
Prove: $\triangle LMO \cong \triangle LNO$



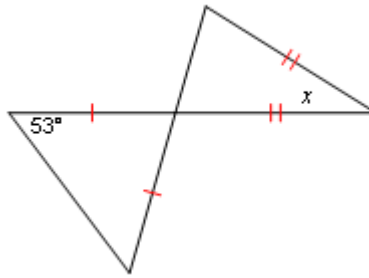
STATEMENTS	REASONS

Fill in all of the missing angles to help you find x .

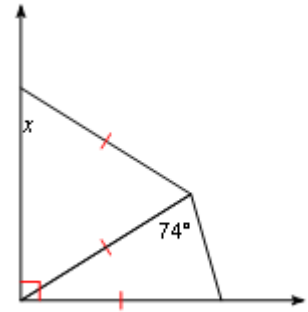
3.



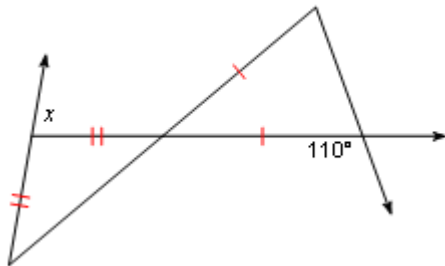
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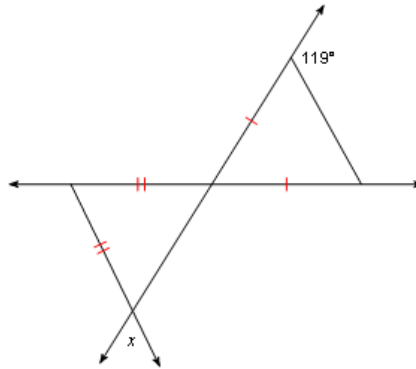
5.



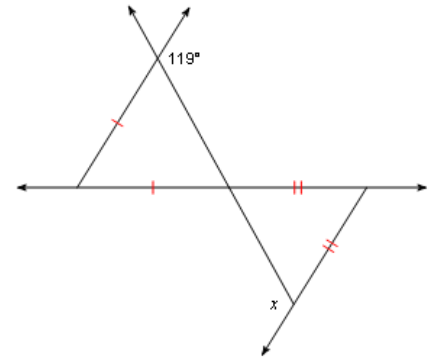
6.



7.



8.



Use the picture to find the following:

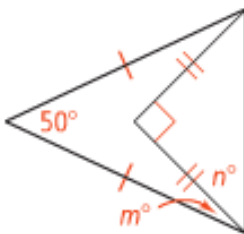
9. If $m\angle L = 58$, then $m\angle LKJ = \underline{\quad? \quad}$.
10. If $JL = 5$, then $ML = \underline{\quad? \quad}$.
11. If $m\angle JKM = 48$, then $m\angle J = \underline{\quad? \quad}$.
12. If $m\angle J = 55$, then $m\angle JKM = \underline{\quad? \quad}$.



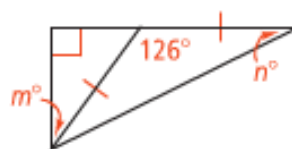
Find the values of m and n .

Algebra Find the values of m and n .

13.



14.



15.

