

Geometry Section 4.7 Day 1
Using Corresponding Parts of Congruent Triangles

Name: _____
 Date: _____ Period: _____

Target Goals:

- 1) Identify congruent overlapping triangles
- 2) Prove two triangles are congruent by first proving two other triangles are congruent

Given the picture below list all the congruent corresponding pairs.

Congruent Sides

Congruent Angles

1)

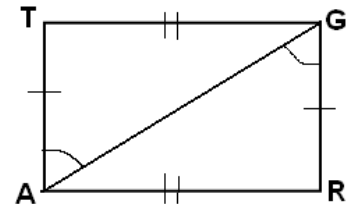
1)

2)

2)

3)

3)



What does CPCTC stand for again?

What do we need before we can use CPCTC?

What are the 5 ways to prove triangles congruent?

1)

4)

2)

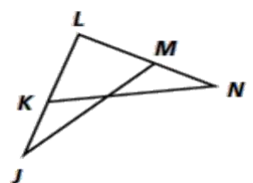
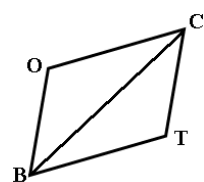
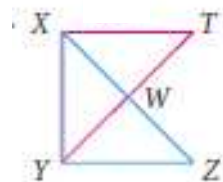
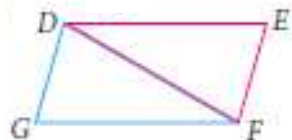
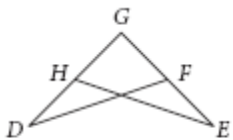
5)

3)

In the following examples, the triangles we are dealing with overlap. Try to visualize and/or redraw the triangles separately. What corresponding side or angle do they have in common?

What property usually surfaces if two triangles share a side or an angle? _____

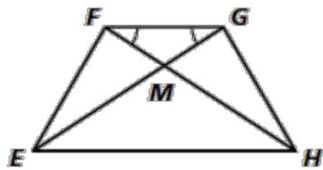
Common angles and sides:



If the two triangles meet and create a flat surface, they typically shared a common _____.

If they two triangles meet and form a point, they typically share a common _____.

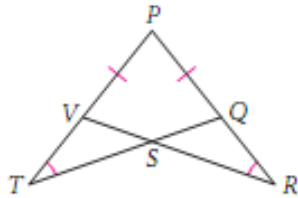
Multiple triangles: List the triangles in the figure below (*Hint: there are 8!*)



Let's use the idea of overlapping triangles, common sides/angles and multiple triangles to prove these triangles congruent:

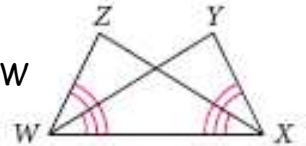
Given: $\angle T \cong \angle R$, $PQ \cong PV$

Prove: $\triangle PQT \cong \triangle PVR$



Given: $\angle ZXW \cong \angle YWX$, $\angle ZWX \cong \angle YXW$

Prove: $\triangle ZWX \cong \triangle YXW$

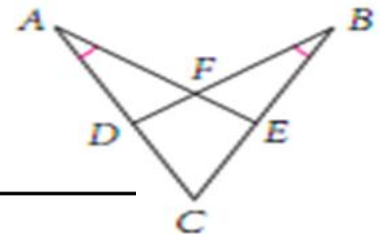


Statements	Reasons

Statements	Reasons

Given: $AC \cong BC$, $\angle A \cong \angle B$

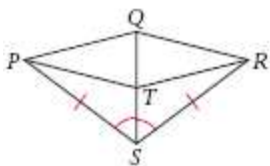
Prove: $\overline{DC} \cong \overline{EC}$



Statements	Reasons

Given: $PS \cong RS$, $\angle PSQ \cong \angle RSQ$

Prove: $\triangle QPT \cong \triangle QRT$

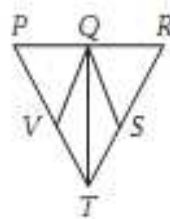


Statements

Reasons

Given: $\overline{QT} \perp \overline{PR}$, \overline{QT} bisects \overline{PR} , $\overline{PT} \cong \overline{RT}$

Prove: $\triangle PTQ \cong \triangle RTQ$



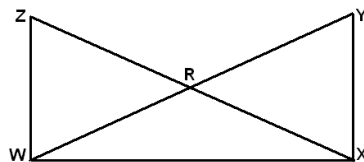
Statements

Reasons

Given: $\angle ZWX$, $\angle YXW$ are right angles

$\overline{ZX} \cong \overline{YW}$

Prove: $\overline{ZW} \cong \overline{YX}$



Statements

Reasons