

Given: X is the midpoint of both segments it is on
 Prove: $\overline{CD} \cong \overline{AB}$

X is midpoint of both segments
 $\overline{AX} \cong \overline{XD}$
 $\overline{BX} \cong \overline{XC}$
 $\angle B, \angle C$ right angles
 $\triangle ABX \cong \triangle DCX$
 $\overline{CD} \cong \overline{AB}$

Given
 Definition of midpoint
 Given
 HL
 Definition of $\cong \Delta s$

Oct 25-9:00 AM

Geometry

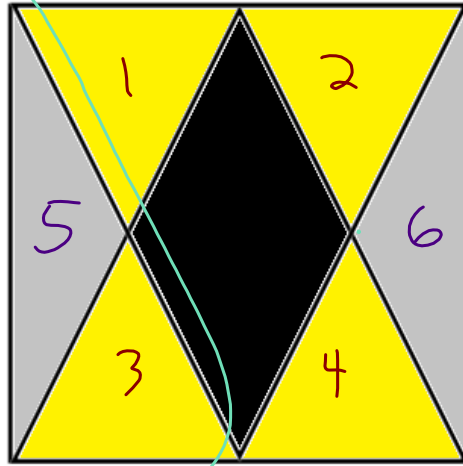
Chapter 4

Section 4-7

May 13-10:02 PM

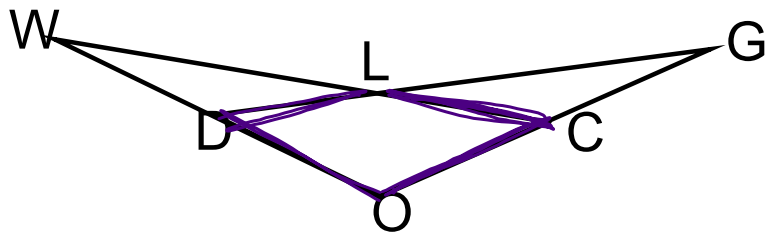
How many triangles are in the pattern on the right?

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Overlapping Triangles



How many triangles are in the diagram?

4 $\triangle WDL$ $\triangle WOC$
 $\triangle LGC$ $\triangle GOD$

Do any of the triangles share any common parts?

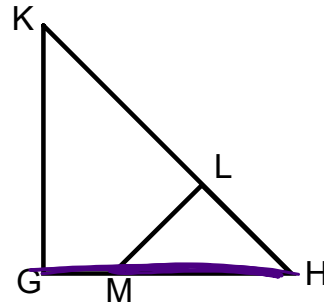
$\angle O$ $\triangle WOC, \triangle GOD$ $\angle G$ $\triangle GOD, \triangle GC$
 $\angle W$ $\triangle WDL, \triangle WOC$

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Overlapping Triangles

How many triangles are in the diagram?

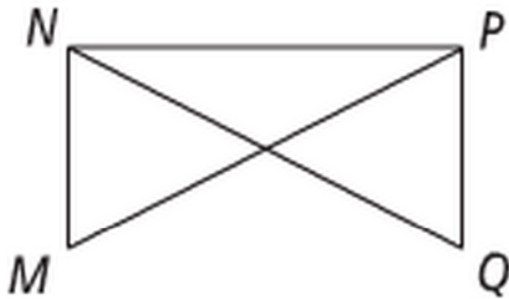
2 $\triangle KGH$
 $\triangle LMH$



Do any of the triangles share any common parts?

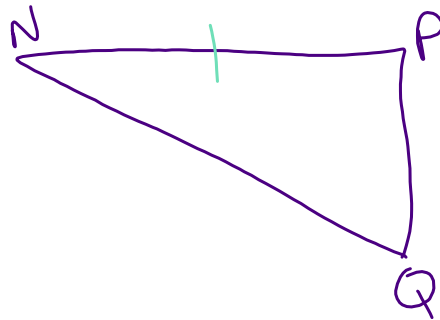
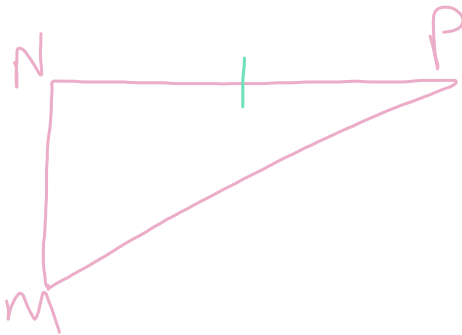
$\angle H$

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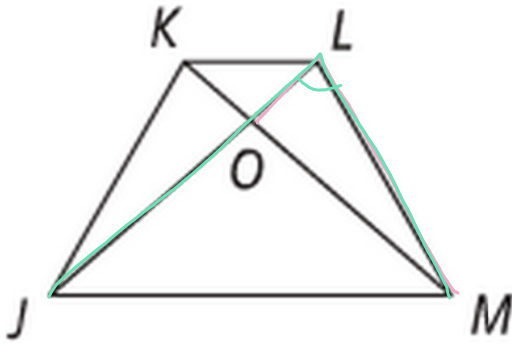
Separate and redraw $\triangle MNP$ and $\triangle QPN$.

Identify the common part(s). NP



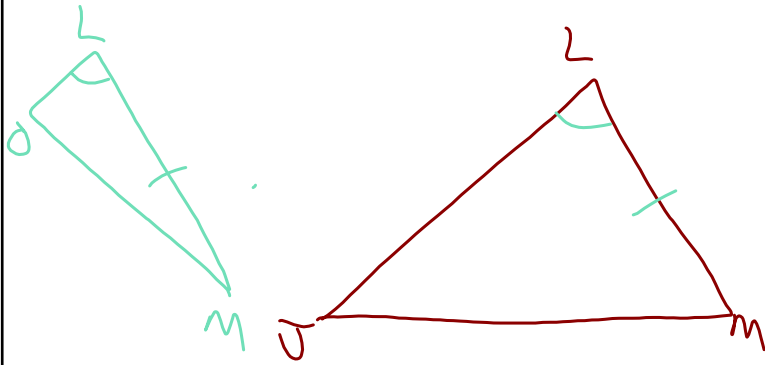
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Common Parts



Separate and redraw $\triangle MOL$ and $\triangle MLJ$.

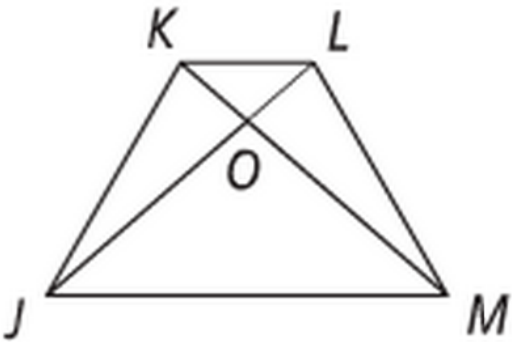
Identify the common part(s).



\overline{ML} , $\angle L$

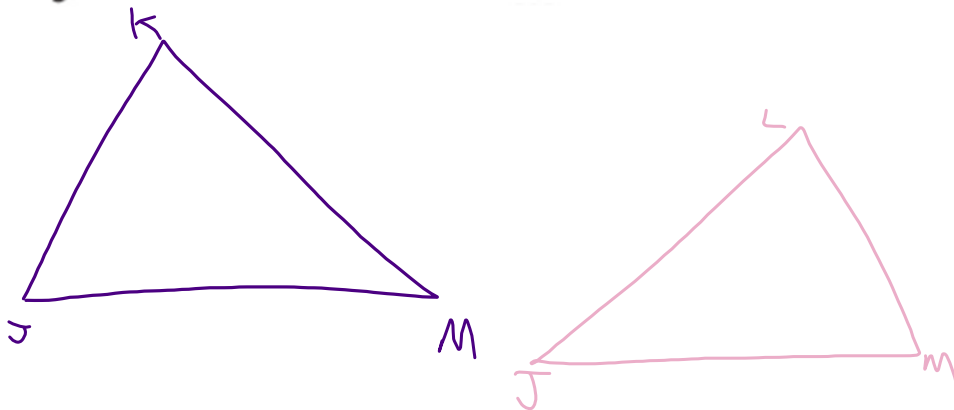
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Common Parts



Separate and redraw $\triangle MKJ$ and $\triangle LJM$.

Identify the common part(s).



\overline{JM}

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G: $\overline{XB} \cong \overline{XC}$, $\angle ABC \cong \angle DCB$ P: $\triangle ABC \cong \triangle DCB$

$\overline{XB} \cong \overline{XC}$, $\angle ABC \cong \angle DCB$ Given
 $\overline{BC} \cong \overline{BC}$ Reflexive
 $\angle DBC \cong \angle ACB$
 $\triangle ABC \cong \triangle DCB$ Isosceles Theorem
 ASA

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G: $\triangle FBA$ $\triangle FBD$ P: $\triangle ABC$ $\triangle DBE$

$\triangle FBA \cong \triangle FBD$ Given
 $\angle ABC \cong \angle DBE$ Reflexive
 $\angle A \cong \angle D$, $\overline{BA} \cong \overline{BD}$ Definition of $\cong \Delta s$
 $\triangle ABC \cong \triangle DBE$ ASA

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Homework

Pages 268 - 270

#8 - 13 all, 15, 16, 18, 21, 23, 24, 26

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