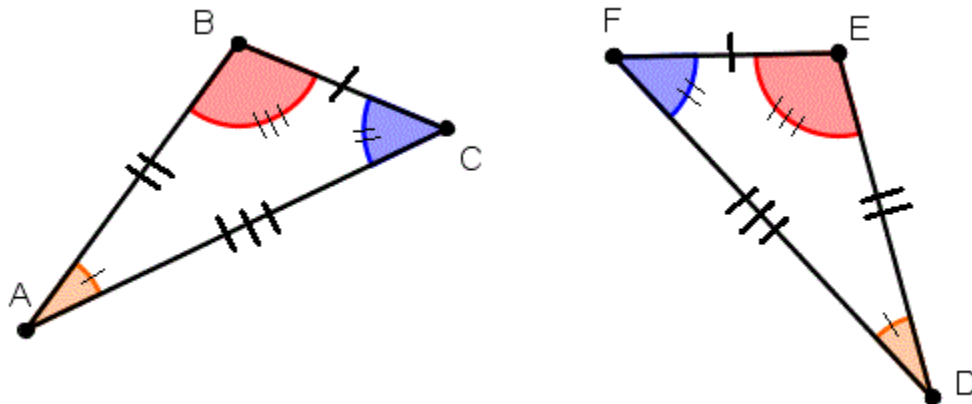


TOPIC 6-1: PARTS OF CONGRUENT TRIANGLES

Objective: To name and label corresponding parts of congruent triangles

TERM:	DEFINITION:
Congruent Figures	Figures that have the same shape and size.
Congruent Triangles	Triangles in which corresponding angles and sides are congruent.

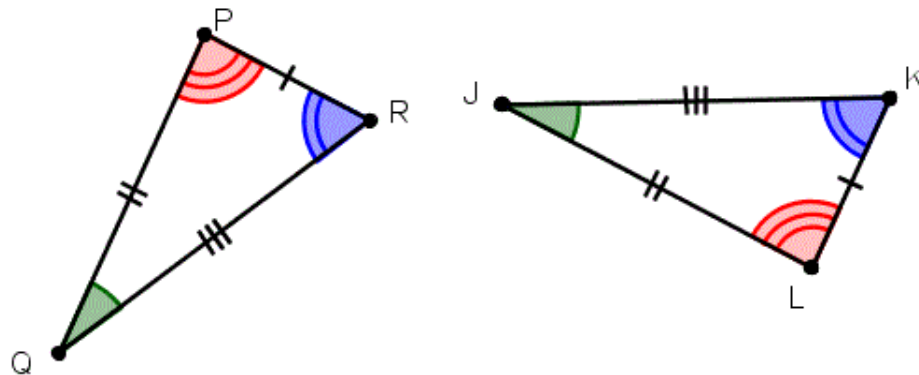
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EXAMPLE 1: If $\triangle ABC \cong \triangle DEF$, then...

$\angle A \cong \angle$ _____	$\overline{AB} \cong$ _____
$\angle B \cong \angle$ _____	$\overline{BC} \cong$ _____
$\angle C \cong \angle$ _____	$\overline{AC} \cong$ _____

Which of the following expresses the correct congruence statement for the figure below?



- (a) $\triangle PQR \cong \triangle KJL$
 (b) $\triangle PQR \cong \triangle LJK$
 (c) $\triangle PQR \cong \triangle LKJ$
 (d) $\triangle PQR \cong \triangle JLK$

EXAMPLE 2: If $\triangle XYZ \cong \triangle WMN$, then determine whether the following statements are TRUE or FALSE. (Sketch a picture first!)

- A) $\triangle YZX \cong \triangle WMN$ TRUE or FALSE?
 B) $\triangle ZXY \cong \triangle NWM$ TRUE or FALSE?
 C) $\triangle YZX \cong \triangle NMW$ TRUE or FALSE?
 D) $\triangle ZYX \cong \triangle NMW$ TRUE or FALSE?

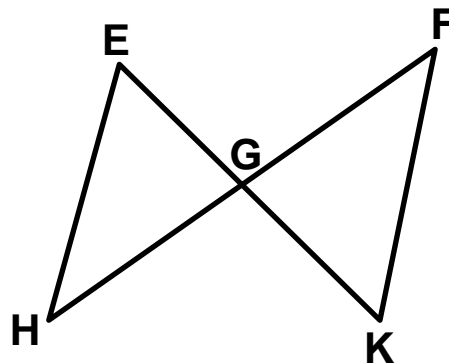
Use the given figures below to name three pairs of congruent angles and three pairs of congruent sides.

EXAMPLE 3: $\triangle EHG \cong \triangle KFG$

\angle _____ \cong \angle _____ _____ \cong _____

\angle _____ \cong \angle _____ and _____ \cong _____

\angle _____ \cong \angle _____ _____ \cong _____

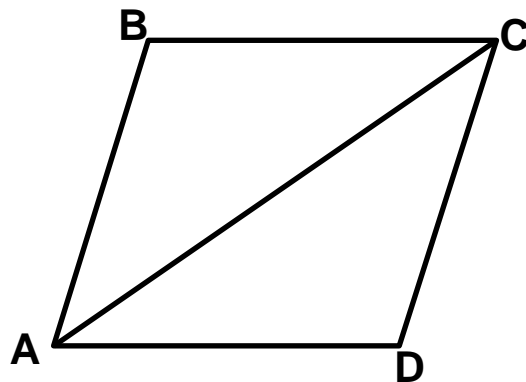


EXAMPLE 4: $\triangle ABC \cong \triangle CDA$

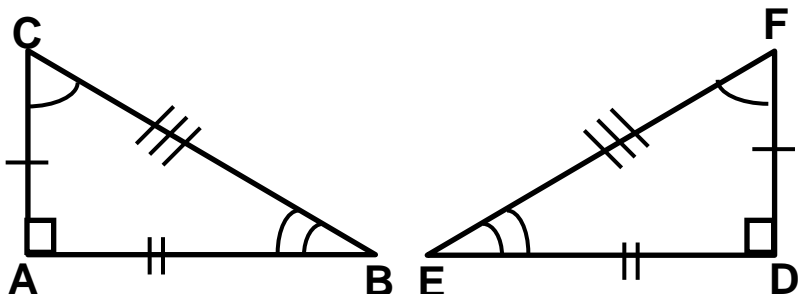
\angle _____ \cong \angle _____ _____ \cong _____

\angle _____ \cong \angle _____ and _____ \cong _____

\angle _____ \cong \angle _____ _____ \cong _____

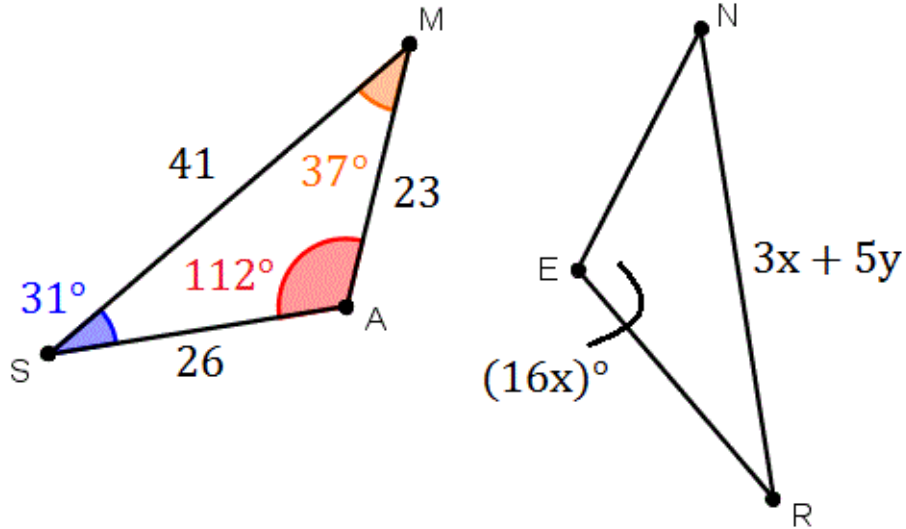


EXAMPLE 5: Using the diagram, complete the congruence statement.



$\triangle ABC \cong \triangle$ _____

EXAMPLE 6: Find the values of x and y given that $\triangle MAS \cong \triangle NER$.



$X =$ _____

$Y =$ _____

EXAMPLE 7: If $\triangle DOG \cong \triangle CAT$ and $DO = 10$, $OG = 12$, $DG = 16$, and $AT = 2x + 6$, then $x = ?$ (Begin with a sketch always!)