

This worksheet is review for your Unit 3 Test. The topics covered are Deductive & Inductive Reasoning; Conditionals; Proofs; Congruent Figures; Proving Triangles Congruent; CPCTC; and Isosceles Triangles.

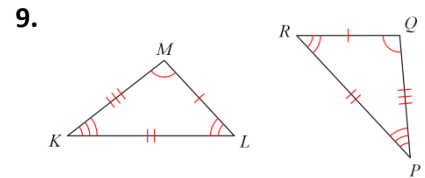
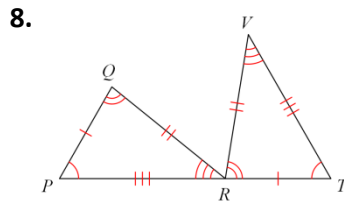
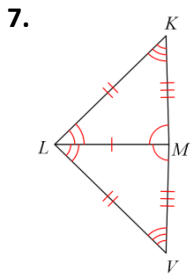
Given the statements “the dog barks” and “a stranger walks by”

1. Write the conditional statement      2. Draw the Euler diagram that represents the conditional      3. Write the converse of the conditional

4. Write the biconditional statement      5. Is your biconditional statement a definition? Explain

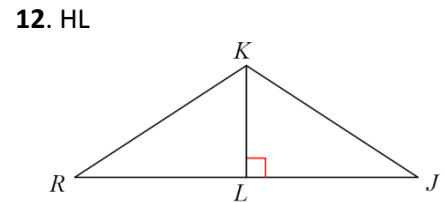
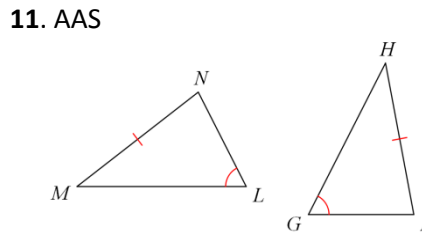
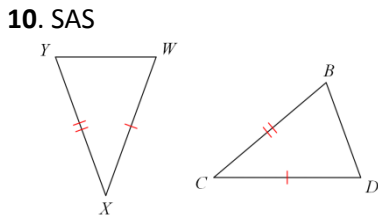
6. Is the statement “A rectangle is a quadrilateral with four congruent sides” a good definition? If not, explain.

For problems 7-9, write the congruence statement for each pair of triangles.



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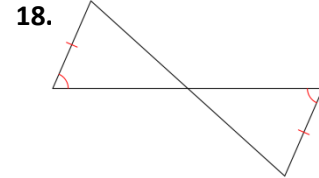
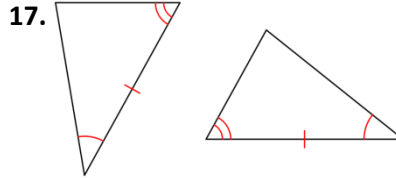
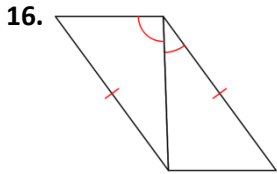
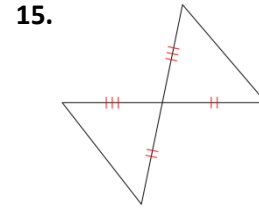
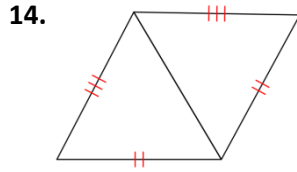
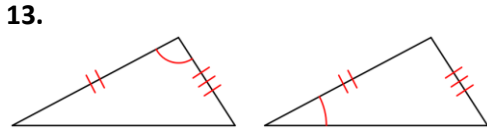
For problems 10-12, state what additional information is required in order to know that the triangles are congruent for the given reason.



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HOMEWORK

For problems 13-18, state if the triangles are congruent. If so, state how you know.



19. Solve for x by completing the algebraic proof below.

$$-2(x - 1) = 6$$

Statement	Reason

20. Solve for x by completing the algebraic proof below.

$$2(2x - 3) = 12 + x$$

Statement	Reason

21. Complete the geometric proof below.

Given:  $\overline{AC}$  bisects  $\angle BAD$  &  $\angle BCD$ ,  $\overline{DC} \perp \overline{AD}$

Prove:  $m\angle B = 90^\circ$

Statement	Reason
$\overline{AC}$ bisects $\angle BAD$ & $\angle BCD$	
	Given
	Definition of perpendicular
$\overline{AC} \cong \overline{AC}$	
$\angle DAC \cong \angle BAC$	
	Definition of angle bisector
$\triangle DAC \cong \triangle BAC$	
$m\angle D = m\angle B$	
$m\angle B = 90^\circ$	

