

Name: key

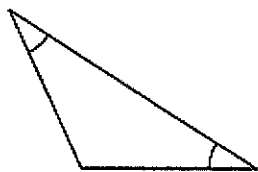
Date:

Period:

HW #5-6: Quiz Review

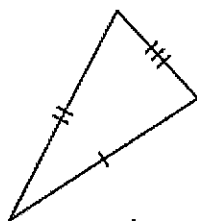
1. Classify each triangles first by its sides, then by its angles.

a.



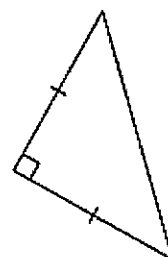
isosceles
obtuse

b.



scalene
acute

c.



isosceles
right

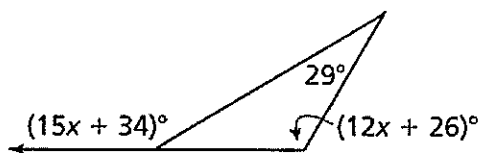
2. Given the congruence statement, identify the corresponding parts.

$$\triangle ZOA \cong \triangle XOY$$

a. $\overline{OX} \cong \underline{\overline{OZ}}$

b. $\angle Z \cong \underline{\angle X}$

3. Find the value of x in the diagram given.

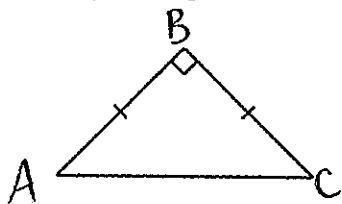


$$15x + 34 = 12x + 26 + 29$$

$$3x = 21$$

$$\boxed{x = 7}$$

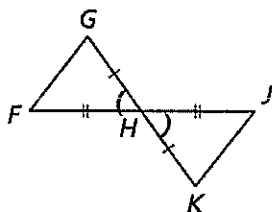
4. Identify the legs and the base of the isosceles triangle.



legs: $\overline{AB}, \overline{BC}$
base: $\overline{AC}$

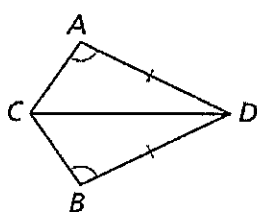
5. Decide whether there is enough information to prove that the triangles are congruent. If they are, write a congruence statement and name the theorem used to prove the triangles are congruent.

a.



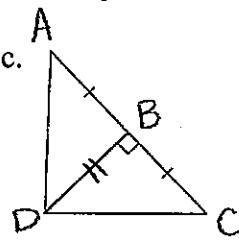
yes
 $\triangle FGH \cong \triangle JHK$
by SAS $\cong$

b.



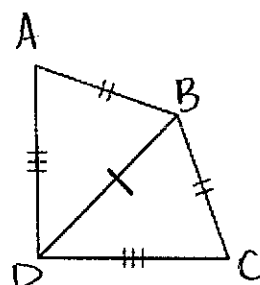
NO

c.



yes
 $\triangle ABD \cong \triangle CBD$
by SAS $\cong$

d.



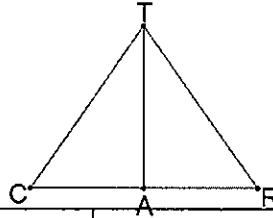
yes
 $\triangle ABD \cong \triangle CBD$
by SSS $\cong$

6. Write a proof.

Given: $\triangle CTR$ is isosceles with base $\overline{CR}$

A is the midpoint of $\overline{CR}$

Prove: $\triangle CAT \cong \triangle RAT$



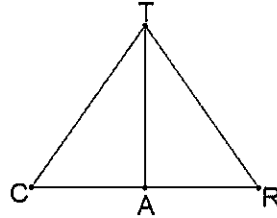
Statements	Reasons
$\triangle CTR$ is isosceles with base $\overline{CR}$ A is the midpoint of $\overline{CR}$	Given
$\overline{CT} \cong \overline{RT}$	Def. of an isosceles triangle
$\overline{CA} \cong \overline{RA}$	Def. of a midpoint
$\overline{AT} \cong \overline{AT}$	Reflex. Prop. $\cong$
$\triangle CAT \cong \triangle RAT$	SSS $\cong$

7. Write a proof.

Given: $\overline{CT} \cong \overline{RT}$

$\overline{AT} \perp \overline{CR}$

Prove: $\triangle CAT \cong \triangle RAT$



Statements	Reasons
$\overline{CT} \cong \overline{RT}$ $\overline{AT} \perp \overline{CR}$	Given
$\angle CAT$ and $\angle RAT$ are right angles	Def. of $\perp$ lines
$\triangle CAT$ and $\triangle RAT$ are right triangles	Def. of a right triangle
$\overline{AT} \cong \overline{AT}$	Reflex. Prop. $\cong$
$\triangle CAT \cong \triangle RAT$	HL $\cong$