

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

Geometry 1/2, Mr. Ferraro/Mr. Wong

### Test Review: Triangles

1. CPCTC stands for \_\_\_\_\_

\_\_\_\_\_

2. If the vertex angle of an isosceles triangle is  $54^\circ$ , then a base angle must measure \_\_\_\_\_.  
(Hint: Draw the figure!)

3. Given two sides of a triangle with lengths of 5cm and 8 cm, which of the following could NOT be the length of the third side?

- (a) 3cm
- (b) 5cm
- (c) 10cm
- (d) 12cm

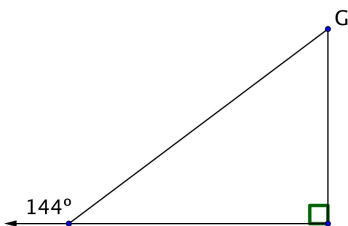
4. List the four different conjectures you can use to prove triangles are congruent. (Also referred to as *congruency shortcuts* in your textbook.)

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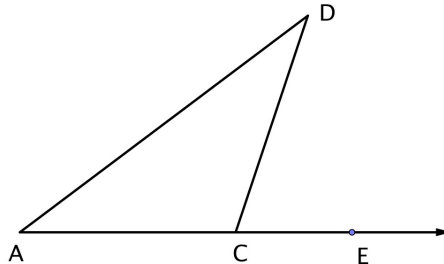
What are two shortcuts that *cannot* be used?

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5. (a) Put an asterisk (\*) by the exterior angle in the triangle below. (b) Then, circle the two *remote interior angles*. (c) Find  $m\angle G$ .

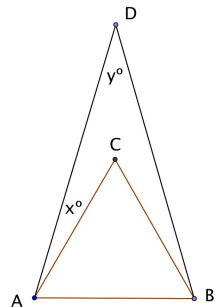


6. Label the figure below such that  $m\angle ADC = 2x + 10$ ,  $m\angle CAD = 5x - 40$ , and  $m\angle DCE = 4x + 30$ . What is  $m\angle ACD$ ?



7. Given  $\triangle ABC$ , if  $AB = 5$ ,  $BC = 12$ , and  $AC = 9$ , list the angles from greatest to least.  
(Hint: Draw the triangle!)

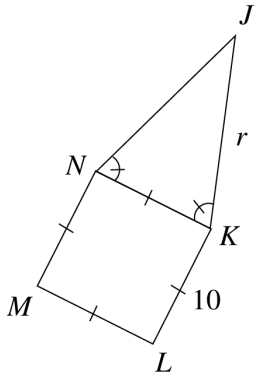
8. In the figure at right,  $\triangle ABD$  is isosceles and  $\triangle ABC$  is equilateral. If  $x = 15$ , find  $y$ .



9. Given  $\triangle ABC$ , with  $\overline{AB} \cong \overline{BC}$ , where  $\overline{BD}$  bisects  $\angle ABC$ , which of the following statements must be false? (DRAW THE TRIANGLE!)

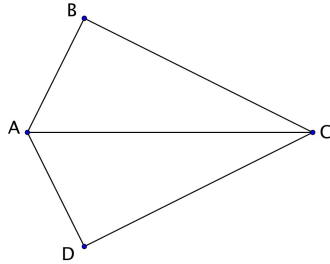
- (a) D is the midpoint of  $\overline{AC}$
- (b)  $\triangle ABD \cong \triangle CBD$
- (c)  $\overline{BD} \perp \overline{AD}$
- (d)  $\triangle ABD$  is isosceles
- (e)  $\overline{BD}$  is an altitude

10. If the perimeter of JKLMN is 60, find the value of  $r$ .



11. Given:  
 $\overline{AB} \cong \overline{AD}$  ;  
 $\overline{AC}$  bisects  $\sphericalangle BAD$

Prove:  
 $\triangle ABC \cong \triangle ADC$



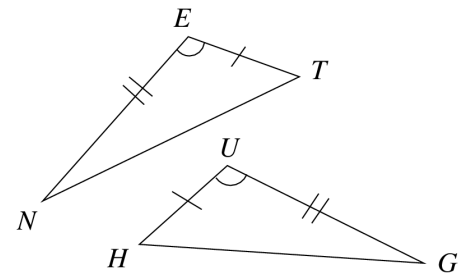
**MARK THE DIAGRAM!**

Statements	Reasons
1.	1. Given
2.	2. Given
3.	3. Definition of Angle Bisector
4.	4. Reflexive
5. $\triangle \underline{\hspace{1cm}} \cong \triangle \underline{\hspace{1cm}}$	5.
6.	6.

12. Complete #11 as a flowchart proof below.

13. Complete #11 a paragraph proof

14.  $\triangle TEN \cong \triangle \underline{\hspace{1cm}}$  by  $\underline{\hspace{1cm}}$



15. In  $\triangle DEF$ ,  $m\angle D = 61^\circ$ ,  $m\angle E = 60^\circ$ , and  $m\angle F = 59^\circ$ . Which side is the longest?

16. Find  $x$ .

