

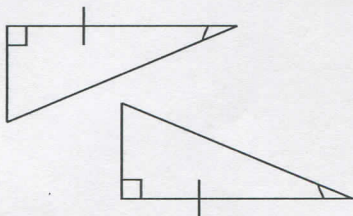
Quiz Review 5.1 - 5.3, 5.5, 5.6

Use when you get it right all by yourself  
*S* Use when you did it all by yourself, but made a silly mistake  
*H* Use when you could do it alone with a little help from teacher or peer  
*G* Use when you completed the problem in a group  
*X* Use when a question was attempted but wrong (get help)  
*N* Use when a question was not even attempted

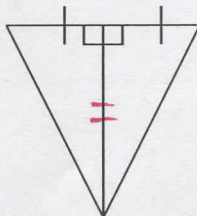
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Congruent triangles	1 - 6	7 - 12	
SSS	1 - 6	7 - 13	
SAS	1 - 6	7 - 12, 14	
ASA	1 - 6	7 - 12, 15	
AAS	1 - 6	7 - 12	
HL	1 - 6	7 - 12	
Arc Marks & Tic Marks	1 - 6	7 - 12	
Classifying Triangles by sides & angles	16	17, 18	19 - 26
Distance formula	16		
Perpendicular slopes	16		
Perimeter	26		
Interior & Angles	27		28 - 35
Triangle Sum Theorem		27	28 - 35
Exterior Angle Theorem		27	28 - 35
Vertical Angles & Linear Pairs			28 - 35

I. Can the two triangles be proved congruent? If so, give the reason, if not write *none*. Show all markings.

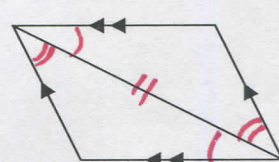
1. ASA



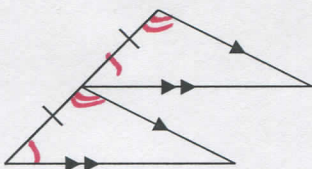
2. SAS



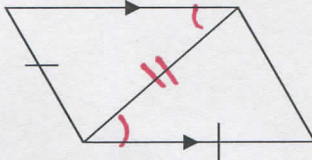
3. ASA



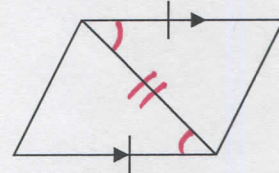
4. ASA



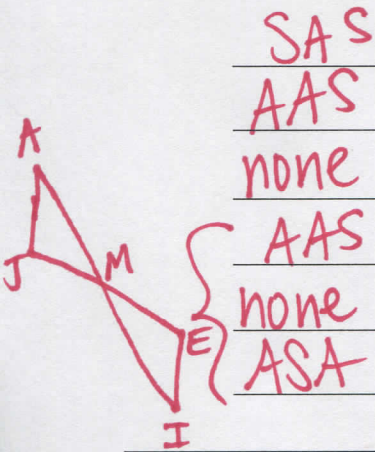
5. none



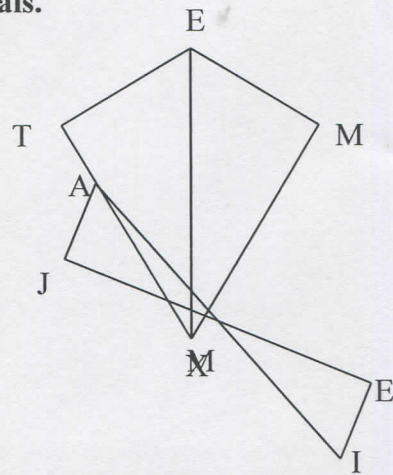
6. SAS



7 – 12: Redraw the image or mark and erase to get the visuals.



7.  $\overline{EX}$  bisects  $\angle TEM$ ,  $\overline{TE} \cong \overline{EM}$
8.  $\overline{TE} \perp \overline{XT}$ ,  $\overline{ME} \perp \overline{XM}$ ,  $\angle TEX \cong \angle MEX$
9.  $\overline{TX} \cong \overline{XM}$ ,  $\overline{EX}$  bisects  $\angle TEM$
10. M is the midpoint of  $\overline{JE}$ ,  $\angle A \cong \angle I$
11. M is the midpoint of  $\overline{JE}$ ,  $\overline{AJ} \cong \overline{IE}$
12.  $\overline{JA} \perp \overline{JE}$ ,  $\overline{EI} \perp \overline{JE}$ , M is the midpoint of  $\overline{JE}$



13 – 15: For each of the diagrams below, state the *additional congruencies* needed to prove  $\triangle I \cong \triangle II$  by the congruency principle indicated.

13. By SSS.

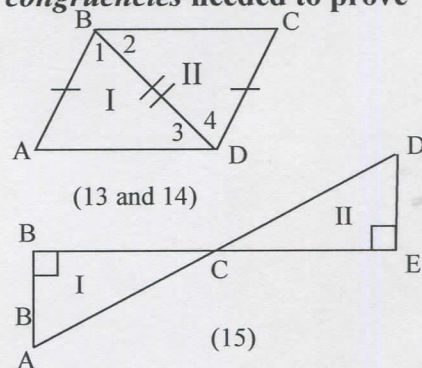
$$\overline{AD} \cong \overline{BC}$$

14. By SAS.

$$\angle 1 \cong \angle 4$$

15. By ASA.

$$\overline{BC} \cong \overline{CE}$$



16. If  $Y(-3,1)$ ,  $X(-1,3)$  and  $Z(3,-1)$  are the vertices of a triangle. Classify the triangle according to the side lengths.

scalene

17. Consider three non-collinear points D, E and F on a coordinate grid. The x-coordinate of D and E are opposites. The y coordinates of D and E are the same. The x coordinate of F is 0. What kind of triangle must  $\triangle DEF$  be? (Scalene, Isosceles, or Equilateral) (HINT: draw your triangle and label it properly.)

Isosceles

18. Consider three non collinear points J, K, and L on a coordinate grid. The y coordinates of J and K are the same. The x coordinates of K and L are the same. Is  $\triangle JKL$  acute right or obtuse? (HINT: draw your triangle and label it properly.)

Right

II. Sometimes, Always, Never Questions: Draw diagrams as visuals.

19. N An equilateral triangle is a right triangle.

20. S An isosceles triangle is equilateral.

21. N An isosceles triangle is scalene.

22. A If 2 sides and 2 angles of  $\triangle GHI$  are congruent, then  $\triangle GHI$  is isosceles.

23. S A scalene triangle is a right triangle.

24. A An equiangular triangle is isosceles, equilateral and acute.

III. Sketch your own diagram and solve.

25. The hypotenuse of an isosceles right  $\triangle DEF$  is segment DE.  $DF = 6x - 5$  and  $EF = 4x + 7$ . What is the value of x?

$$x = 6$$

26. If  $\triangle VSY$  is isosceles and its perimeter is less than 45, which side is the base? (x is an integer).  $SV = 10$ ,  $VY = x + 7$ ,  $SY = 2x - 8$

$$x = 9$$

VY

27.  $\triangle ABC$  has an exterior angle at A. The measure of the exterior angle is  $(6x - 7)^\circ$ . The  $m\angle B = (2x)^\circ$  and the  $m\angle C = (103 - x)^\circ$ . Find  $x$ .

$x = 22$

IV. Find the missing angles.

28.  $m = 30^\circ$

29.  $n = 50^\circ$

30.  $p = 82^\circ$

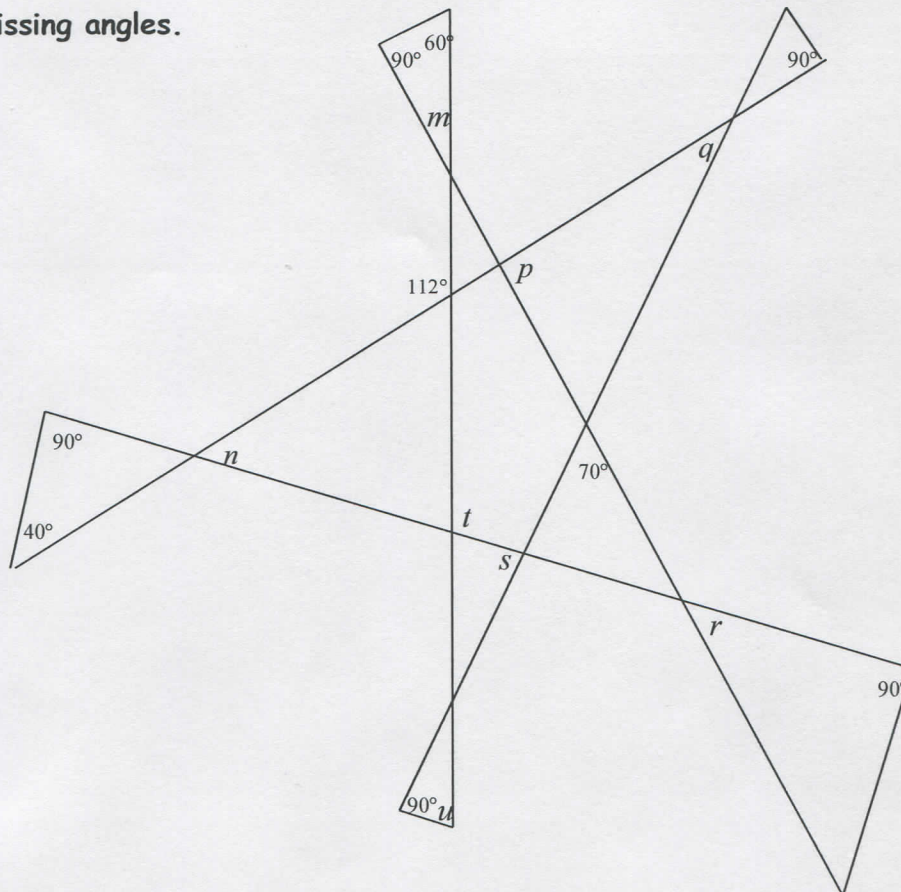
31.  $q = 28^\circ$

32.  $r = 32^\circ$

33.  $s = 78^\circ$

34.  $t = 118^\circ$

35.  $u = 50^\circ$



**CYU Reflection:** How far can you go: basic, intermediate, or advanced?

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the

● ● ● ● ● ● ● ●

1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!

➔