

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

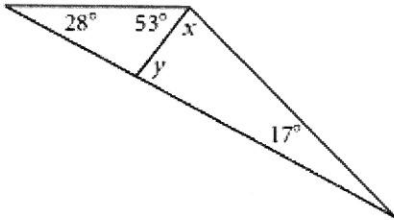
**Unit 5 Triangles Practice Test 1**

1) Can you construct the following triangles? If so, sketch an example.

- a. Right Equilateral      b. Isosceles Right      c. Equilateral Acute Equiangular      d. Obtuse Scalene

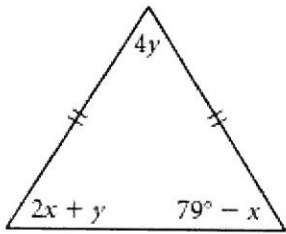
2) Find  $x$  and  $y$ .

$x = \underline{\hspace{2cm}}$ ,  $y = \underline{\hspace{2cm}}$

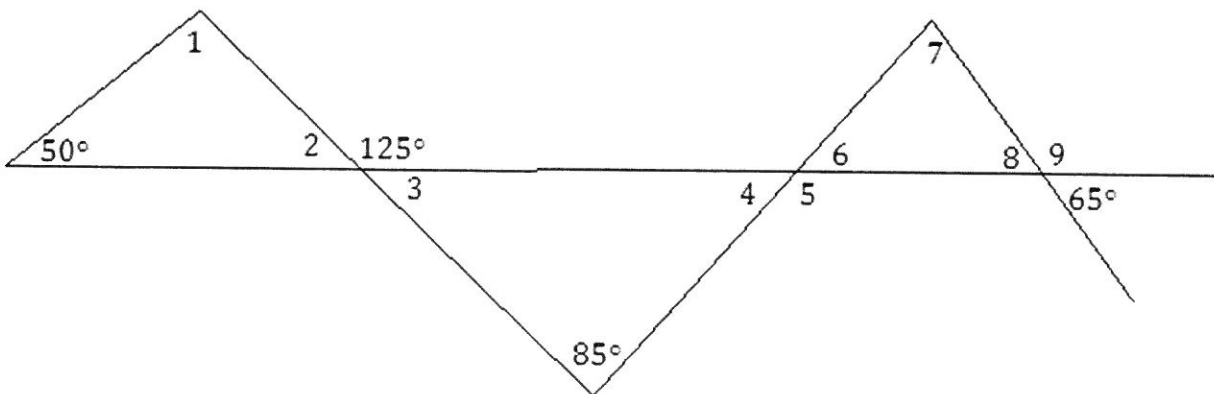


3) Find  $x$  and  $y$  (Hint: Set up a system of equations)

$x = \underline{\hspace{2cm}}$ ,  $y = \underline{\hspace{2cm}}$

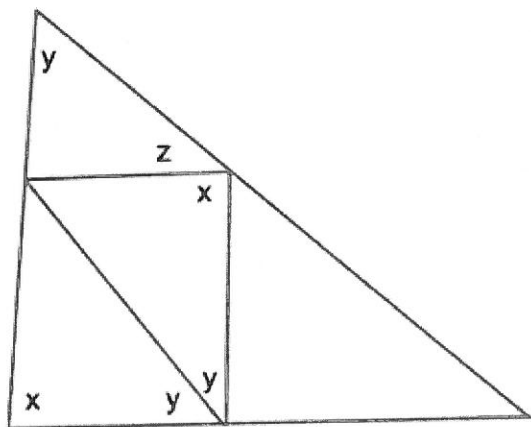


4)



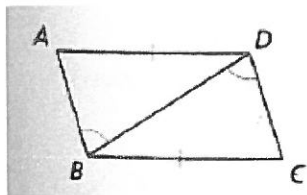
5) Given  $\triangle PAC \cong \triangle BIG$ ,  $\angle G = (8x + 3y)^\circ$ ,  $\angle A = 56^\circ$ ,  $\angle B = 54^\circ$ ,  $\angle I = (5x + 8y)^\circ$ , find  $x$  and  $y$ .

6) Express angle  $z$  in terms of  $x$  and  $y$ .

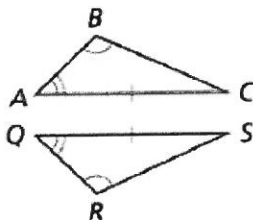


7) Decide if the triangles are congruent. If so, provide a shortcut that proves they are congruent. Then write a congruence statement. If they are not congruent, give a reason why.

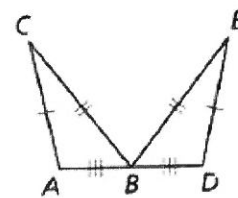
$\triangle ABD$  and  $\triangle CDB$



$\triangle ABC$ ,  $\triangle QRS$

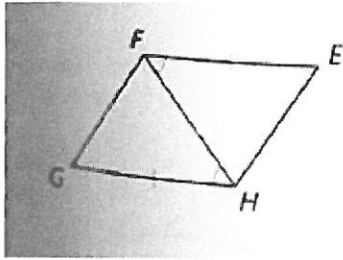


$\triangle ABC$ ,  $\triangle DBE$

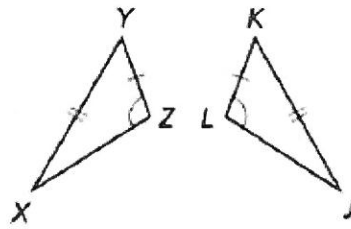


(question 7 continued)

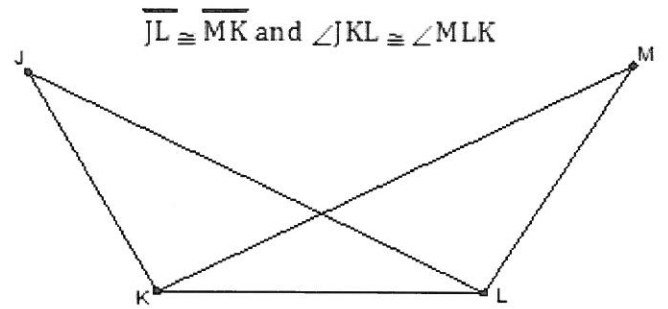
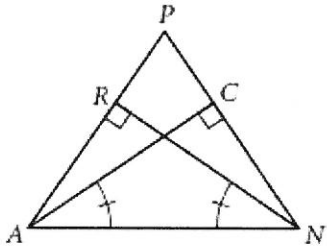
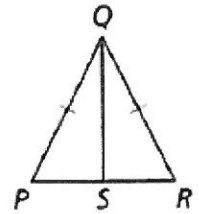
$\triangle EFH$  and  $\triangle GHF$



$\triangle XYZ$ ,  $\triangle JKL$



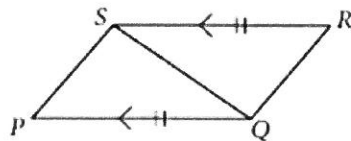
$\triangle PQS$ ,  $\triangle RQS$



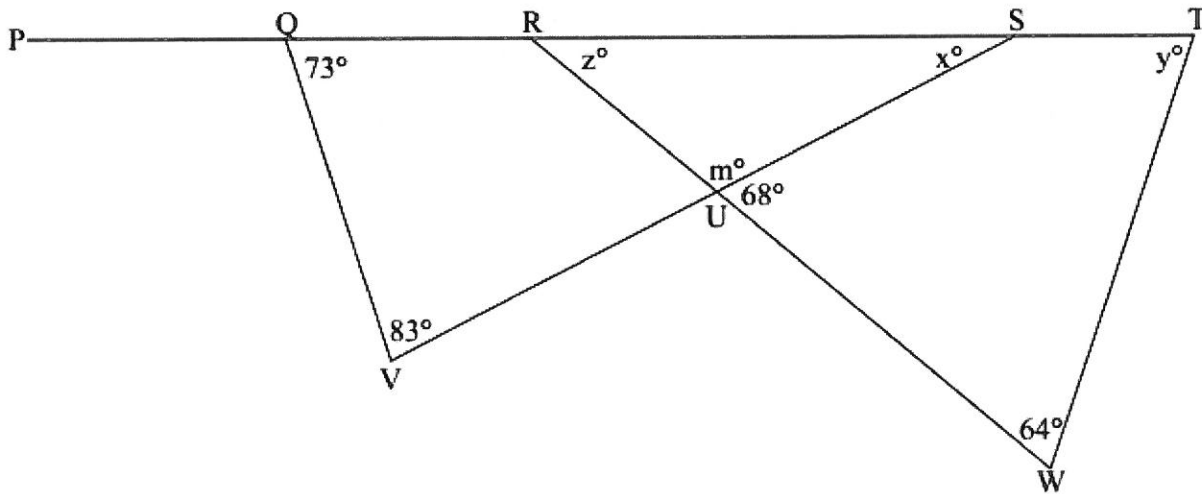
8) Prove the following.

**Given:**  $\overline{PQ} \parallel \overline{SR}$  and  $\overline{PQ} \cong \overline{SR}$

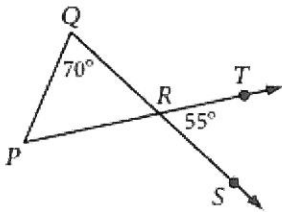
**Show:**  $\overline{SP} \cong \overline{QR}$



9) Example 3: Determine the measures of all unknown angles in the figure below:



10) Use the diagram to explain why  $\triangle PQR$  is isosceles.



11) On the set of axes below, graph and label  $\triangle DEF$  with vertices at  $D(-4, -4)$ ,  $E(-2, 2)$ , and  $F(8, -2)$ . If  $G$  is the midpoint of  $\overline{EF}$  and  $H$  is the midpoint of  $\overline{DF}$ , state the coordinates of  $G$  and  $H$  and label each point on your graph. Explain why  $\overline{GH} \parallel \overline{DE}$ .

