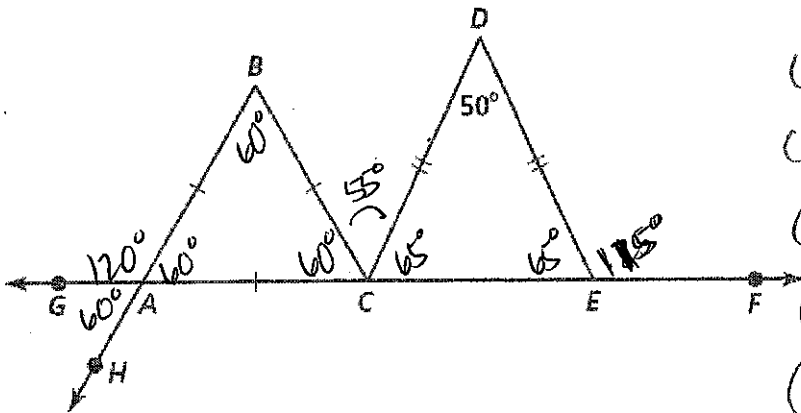


**4-6 Isosceles and Equilateral Triangles Worksheet**

Use the figure to find the measure of each angle.

1.

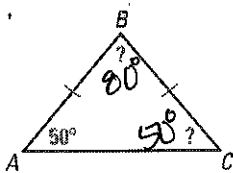


- (a)  $m\angle BCA = 60^\circ$
- (b)  $m\angle DCE = 65^\circ$
- (c)  $m\angle DEF = 115^\circ$
- (d)  $m\angle BCD = 55^\circ$
- (e)  $m\angle BAG = 120^\circ$
- (f)  $m\angle GAH = 60^\circ$

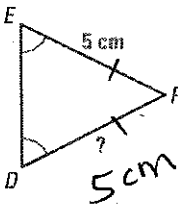
2. Is every equilateral triangle isosceles? Yes (2 equal sides)  
 Is every isosceles triangle equilateral? No (only 2 equal sides, not 3)  
 Explain your reasoning.

Find the unknown measures.

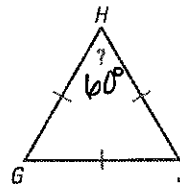
3.



4.

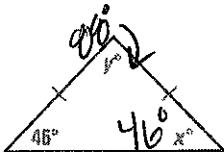


5.

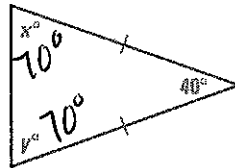


Solve for x and y.

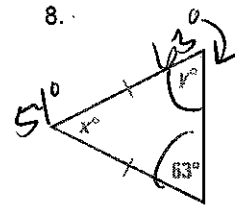
6.



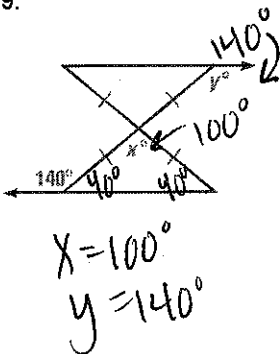
7.



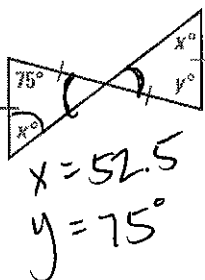
8.



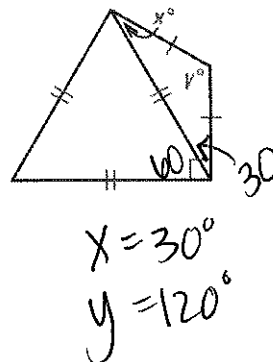
9.



10.

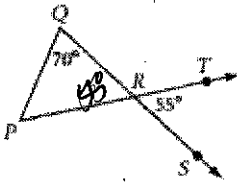


11.

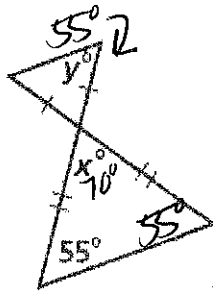


12.

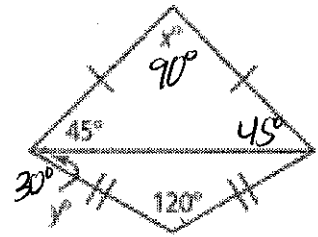
Use the diagram to explain why  $\triangle PQR$  is isosceles.



13.

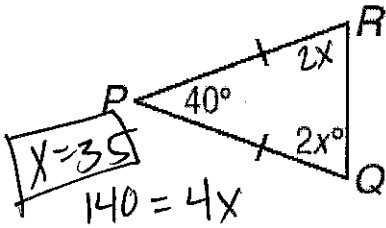


14.

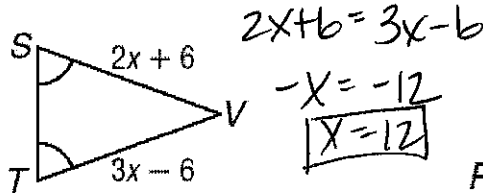


Find the value of the missing variables.

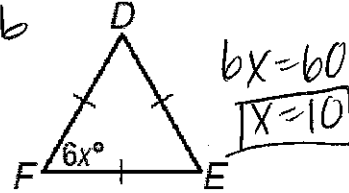
15.



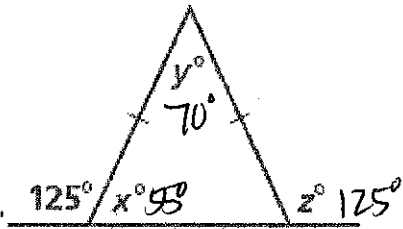
16.



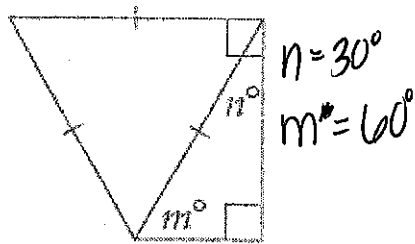
17.



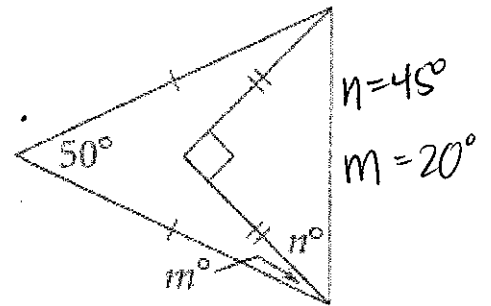
18.



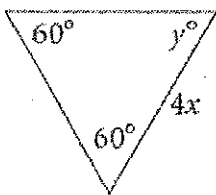
19.



20.



21.

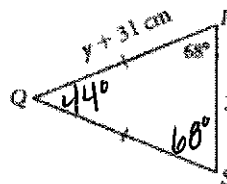


Perimeter is 54.

$3(4x) = 54$   
 $12x = 54$   
 $x = 4.5$

22.

The perimeter of  $\triangle QRS$  is 344 cm.  $m\angle Q = 44^\circ$ ,  
QR = \_\_\_\_\_



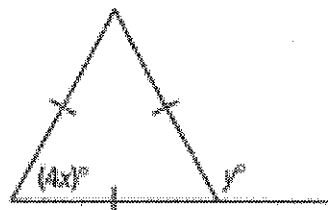
$3(y + 31) = 344$   
 $3y + 93 = 344$   
 $y = 83.7$

23.



$2x + 3 = 45$   
 $2x = 42$   
 $x = 21$

24.



$4x = 60$   
 $x = 15$

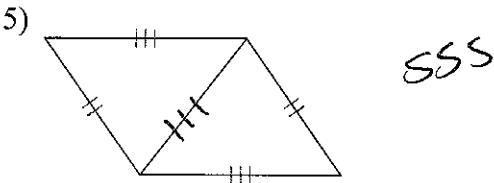
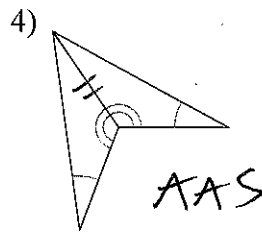
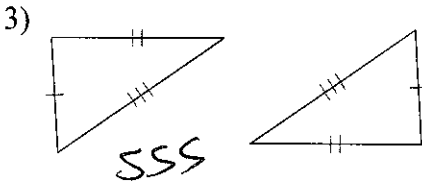
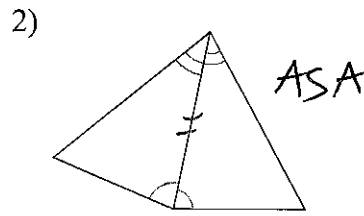
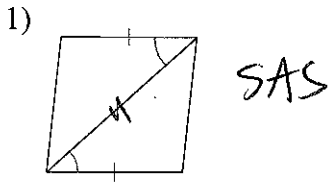
$y = 120^\circ$

Review for Quiz Continued

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

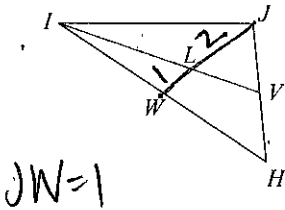
State if the two triangles are congruent. If they are, state how you know.

- |     |
|-----|
| SSS |
| SAS |
| ASA |
| AAS |
| HL  |

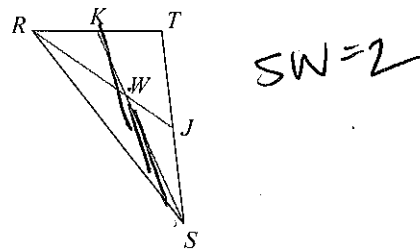


Each figure shows a triangle with one or more of its medians.

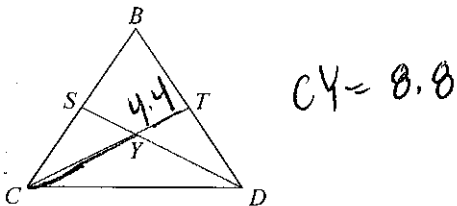
6) Find  $JW$  if  $JL = 2$



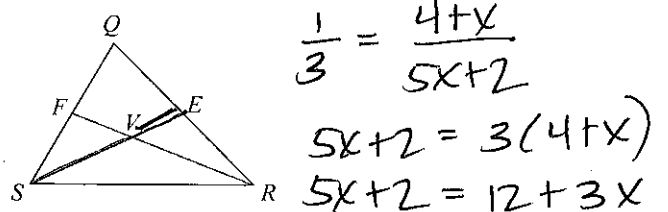
7) Find  $SW$  if  $SK = 3$



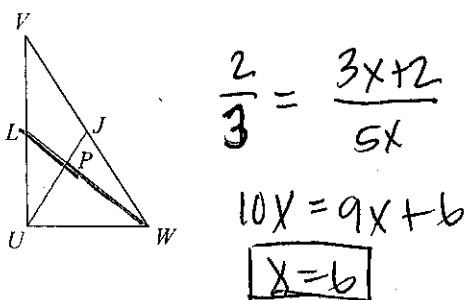
8) Find  $CY$  if  $YT = 4.4$



9) Find  $x$  if  $SE = 5x + 2$  and  $VE = 4 + x$



10) Find  $x$  if  $WP = 3x + 2$  and  $WL = 5x$



$2x = 10$   
 $x = 5$