Name Key Per._____ Date_____

Geometry Ch. 5 Practice Test

In addition to the following questions, the test will include:

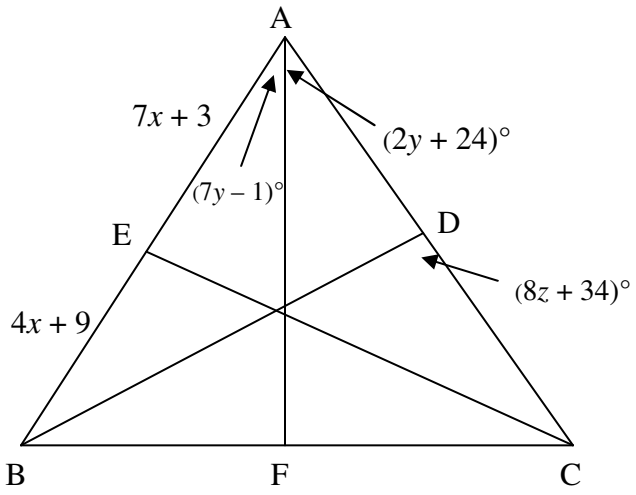
- Using a given diagram, name the altitude, the median, the angle bisector and the perpendicular bisector shown on the diagram. This will show that you know the characteristics of each special segment.
- Given diagrams, complete the picture so that the correct segment is shown with its essential characteristics.

1. In the following figure ΔABC, $\overline{AF}$ is an ∠ bisector, $\overline{BD}$ is an altitude, and $\overline{CE}$ is a median. Find *x*, *y*, and *z*.

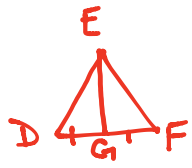
$7x+3=4x+9$
$x=2$

$7y-1=2y+24$
$y=5$

$8z+34=90$
$z=7$



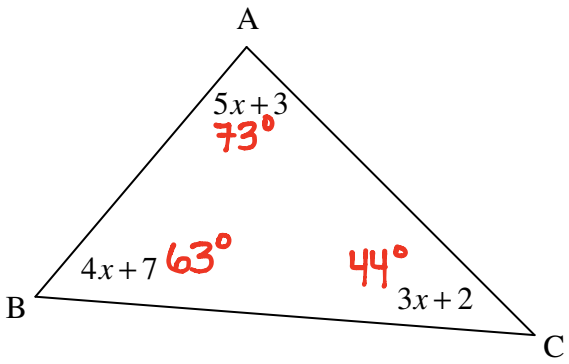
2. Given ΔDEF with $\overline{EG}$ as a median and DG = 2*x* + 1, $m\angle DEG = 9x + 5$, $m\angle EGF = 19x + 14$, GF = 3*x* – 2, and $m\angle GEF = 11x - 1$.
Find *x*.



$DG = GF$
$2x+1 = 3x-2$
$3 = x$

3. List the sides in order from least to greatest.

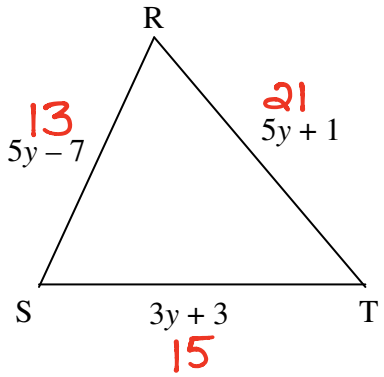
$5x+3+3x+2+4x+7=180$
$12x=168$
$x=14$



$\overline{AB}, \overline{AC}, \overline{BC}$

4. In ΔRST the perimeter is 49.
List the angles in order from least to greatest in ΔRST.

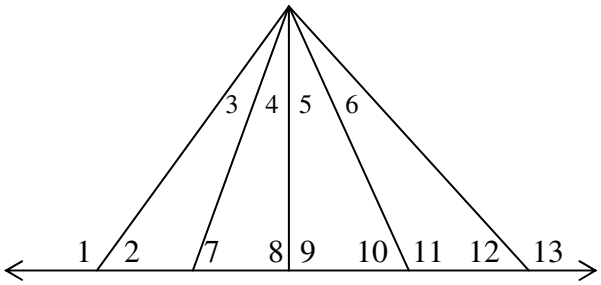
$5y-7+5y+1+3y+3=49$
$y=4$



$\angle T, \angle R, \angle S$

5. Which ∠ has the greatest measure, ∠9, ∠2, or ∠4?

∠9



6. If the measures of two sides of a triangle are 8 and 19, what are the possible measures of the third side?

$11 < x < 27$

For questions 7-8, determine if it is possible to have a triangle with the give side lengths.

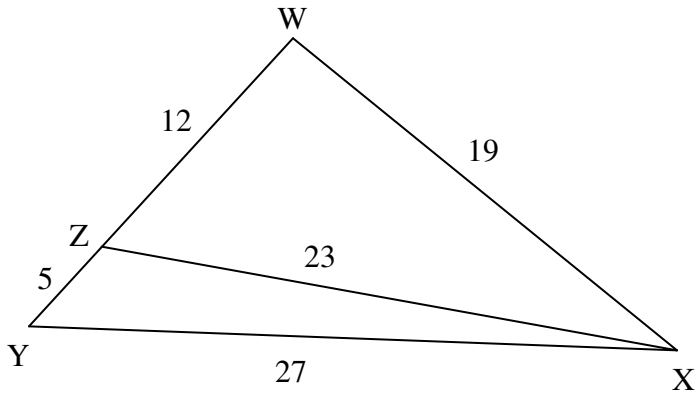
7. 7, 14, 7

no

8. 5, 5, 2

yes

Use the figure below for problems 9-10.



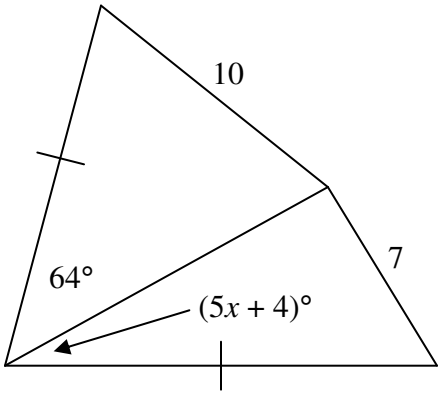
9. Which angle is the smallest in ΔWXZ?

∠X

10. Which angle is the largest in ΔZXY?

∠Z

11. Write a pair of inequalities to describe the possible values of x.



12. Write an inequality to describe the possible values of x.