Name_____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 $\triangle ABC$, $\overline{AF}$ is an $\angle$ bisector, $\overline{BD}$ is an altitude, and $\overline{CE}$ is a median. Find x, y, and z.
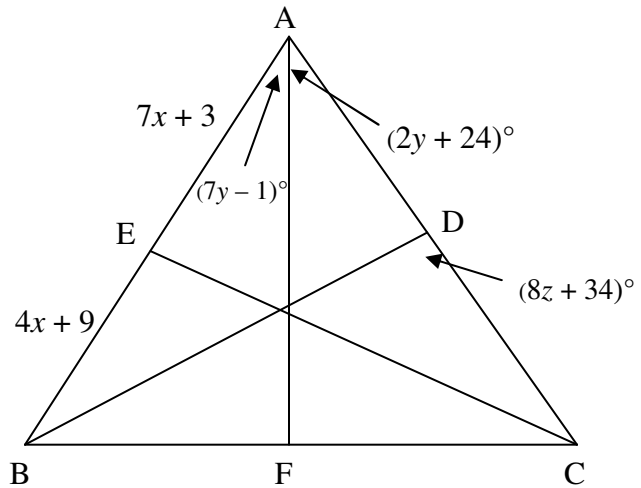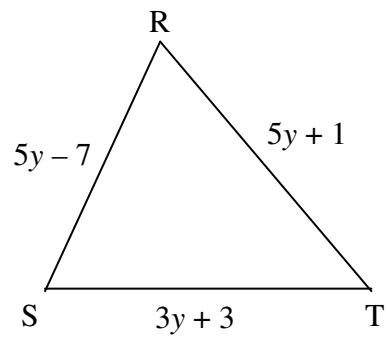

2. Given $\triangle DEF$ with $\overline{EG}$ as a median and $DG = 2x + 1$, $m\angle DEG = 9x + 5$, $m\angle EGF = 19x + 14$, $GF = 3x - 2$, and $m\angle GEF = 11x - 1$.
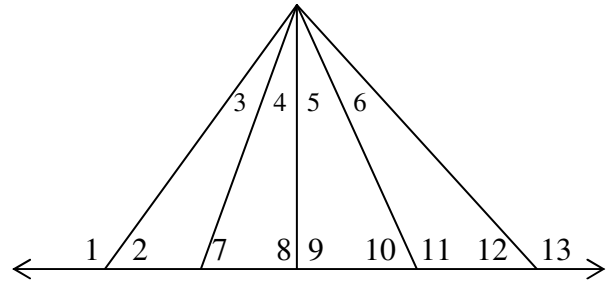   Find x.

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

A

$5x+3$

$4x+7$

B

$3x+2$

C
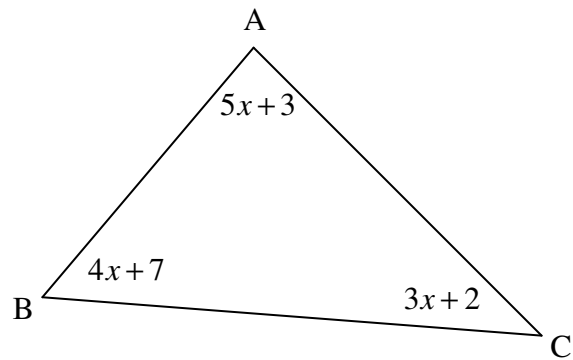
4. In $\triangle$RST the perimeter is 49.
   List the angles in order from least to greatest in $\triangle$RST.

R

$5y+1$

$5y-7$

S

$3y+3$

T

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

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

For questions 7-8, determine if it is possible to have a triangle with the give side lengths.
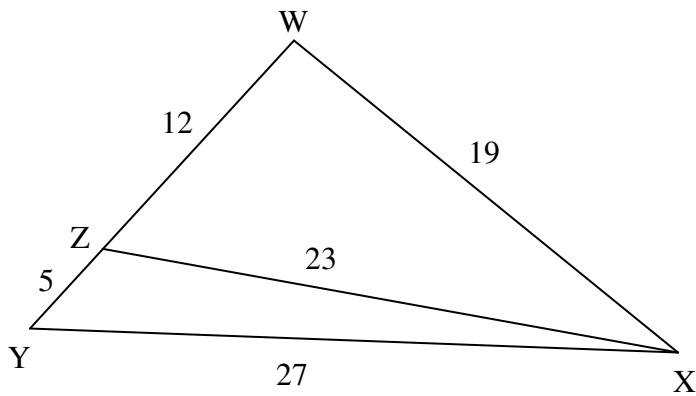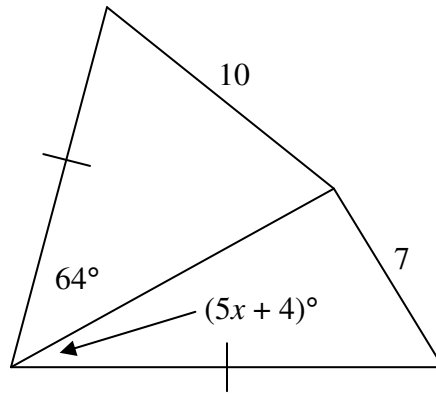
7. 7, 14, 7   8. 5, 5, 2

Use the figure below for problems 9-10.

9. Which angle is the smallest in ΔWXZ?

10. Which angle is the largest in ΔZXY?

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

10

7

64°

(5x + 4)°

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

3x + 9

54

112° 107°

32   32