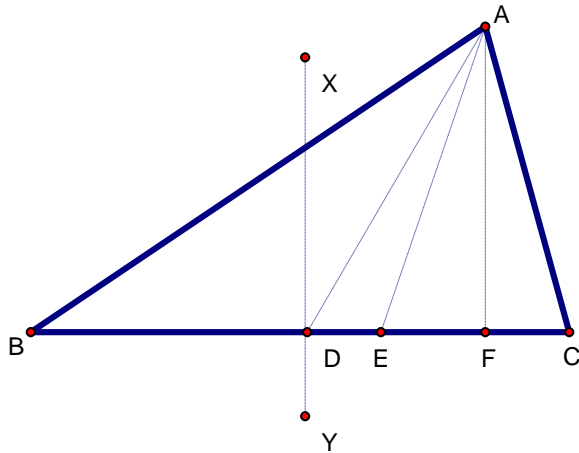


## Geometry Chapter 5 Practice Test 2 (2013-14)

Name \_\_\_\_\_



In the figure above,  $BD = CD$ ,  $\angle XDC = \angle AFC = 90^\circ$ , and  $\angle BAE = \angle CAE$ .

- \_\_\_\_\_ 1. What line is a median of  $\triangle ABC$ ?
- \_\_\_\_\_ 2. What line is an angle bisector of  $\triangle ABC$ ?
- \_\_\_\_\_ 3. What line is a perpendicular bisector of  $\triangle ABC$ ?
- \_\_\_\_\_ 4. What line is an altitude of  $\triangle ABC$ ?

State if the following measurements could be the side lengths of a triangle.

- |    |          |     |    |  |     |          |     |    |
|----|----------|-----|----|--|-----|----------|-----|----|
| 5. | 3, 4, 6  | Yes | No |  | 6.  | 10, 5, 4 | Yes | No |
| 7. | 8, 8, 15 | Yes | No |  | 8.  | 7, 4, 7  | Yes | No |
| 9. | 3, 3, 6  | Yes | No |  | 10. | 1, 2, 3  | Yes | No |

11. In  $\triangle ABC$   $\angle A = 4x$ ,  $\angle B = 3x + 50$ , and  $\angle C = 4x + 20$ .  
Determine the longest and shortest side of  $\triangle ABC$ .

Largest = \_\_\_\_\_

Shortest = \_\_\_\_\_

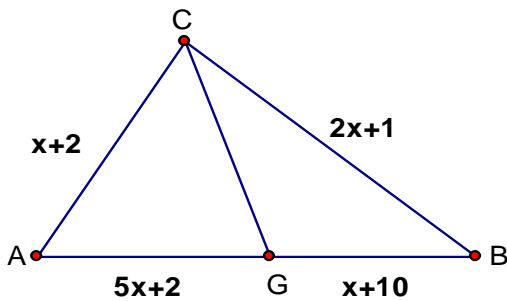
Tell what the third side of a triangle must fall between given the two side measurements.

12. 4, 5 \_\_\_\_\_  
 13. 20, 1 \_\_\_\_\_  
 14. 8, 20 \_\_\_\_\_  
 15. 10, 10 \_\_\_\_\_

16. In  $\triangle ABC$   $A = (3, 4)$ ,  $B = (2, -1)$ , and  $C = (9, 2)$ .  
 Determine which angle is largest and which is smallest.

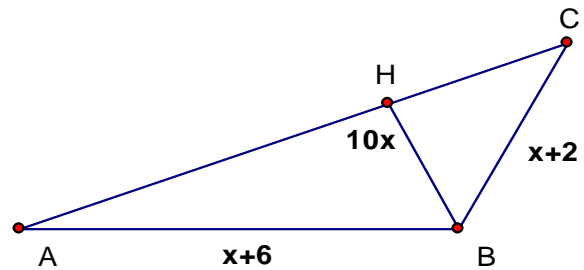
Largest = \_\_\_\_\_ Smallest = \_\_\_\_\_

17. Find BC if  $\overline{CG}$  is a median of  $\triangle ABC$ .



BC = \_\_\_\_\_

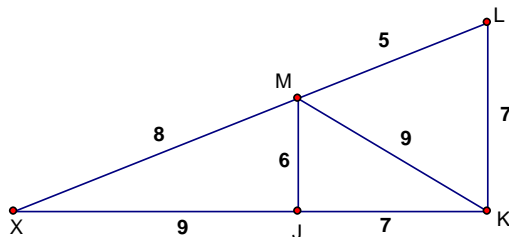
18. Find BC if  $\overline{BH}$  is an altitude of  $\triangle ABC$ .



BC = \_\_\_\_\_

Consider the figure below. Write an inequality ( $>$ ,  $<$ ) relating the two angles.  
 Figure is not drawn to scale and the measurements are not mathematically true.

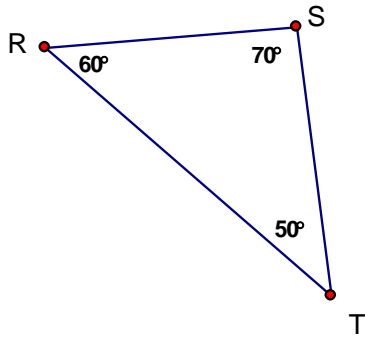
19.  $\angle JMK$  \_\_\_\_\_  $\angle MJX$       20.  $\angle MKJ$  \_\_\_\_\_  $\angle MKL$



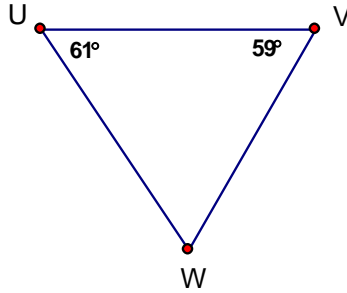
21. In  $\triangle ABC$ ,  $A = (4, 9)$ ,  $B = (2, -1)$ , and  $C = (-6, 5)$ .  
 What are the coordinates of X if  $\overline{AX}$  is a median of  $\triangle ABC$ ? \_\_\_\_\_

Name the longest side in the figures below.

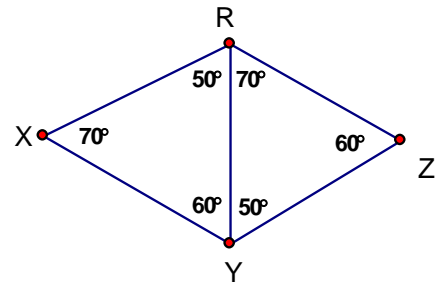
22. Longest = \_\_\_\_\_



23. Longest = \_\_\_\_\_



24. Longest = \_\_\_\_\_



- \_\_\_\_\_ 25. Which set of numbers can be a measure of the sides of a triangle.  
 A. 2, 6, 3      B. 3, 10, 13      C. 4, 6, 1      D. 5, 7, 3

- \_\_\_\_\_ 26. In  $\triangle RST$   $\angle R = x+10$ ,  $\angle S = x+5$ , and  $\angle T = 3x-35$ . Choose the list of sides of  $\triangle RST$  that are ordered correctly from longest to shortest.  
 A.  $\overline{TR}, \overline{RS}, \overline{ST}$       B.  $\overline{ST}, \overline{RS}, \overline{TR}$       C.  $\overline{RS}, \overline{ST}, \overline{TR}$       D.  $\overline{ST}, \overline{TR}, \overline{RS}$

27. Which angles are less than  $\angle 5$  below? \_\_\_\_\_

28. Which angles are less than  $\angle 3$  below? \_\_\_\_\_

