Name: Date: Period:

HW #6-12: Test and Performance Task Review Packet

1. A point that is the same distance from two or more objects is _____ from the objects.

2. A _____ is a segment that joins the midpoints of two sides of the triangle.

3. The point of concurrency of the angle bisectors of the triangle is the _____.

4. Write an equation in slope-intercept form for the perpendicular bisector of the segment with endpoints at X(3, 2) and Y(5, 10).

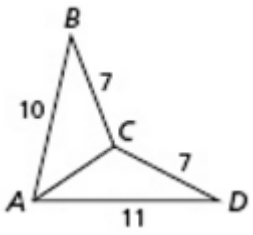
5. Find the circumcenter of the triangle with vertices M(0, 6), N(8, 0) and O(0, 0).

6. The coordinates of a triangular piece of a mobile are (0, 4), (3, 8) and (6, 0). **The piece will hang from a chain to that it is balanced.** At what coordinates should the chain be attached?

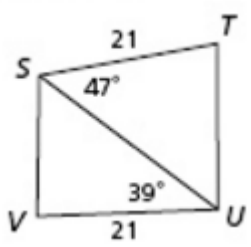
7. Write an indirect proof that a triangle cannot have two obtuse angles.

8. Complete the statement with <, >, or =

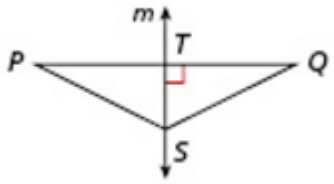
   a. $m\angle DCA$ _____ $m\angle BCA$

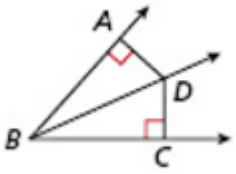
   b. TU _____ SV

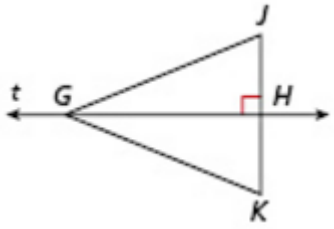
9. Given that PS = 53.4, QT = 47.7 and QS = 53.4, find PQ.



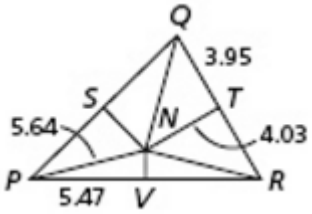
10. Given that AD = 61, CD = 61, and $m\angle ABC = 48°$, find $m\angle CBD$.



11. Given that line *t* is the perpendicular bisector of $\overline{JK}$, JG = (x + 12) an KG = (3x – 17), find KG.

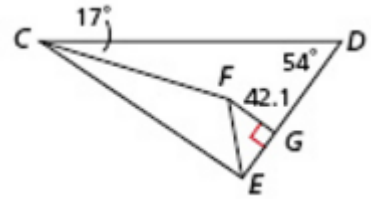


12. $\overline{SN}, \overline{TN}$ and $\overline{VN}$ are the perpendicular bisectors of ΔPQR. Find each length:



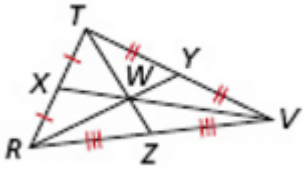
a. NR = _____
b. RV = _____
c. TR = _____
d. QN = _____

13. $\overline{CF}$ and $\overline{EF}$ are angle bisectors of ΔCDE. Find each measure:



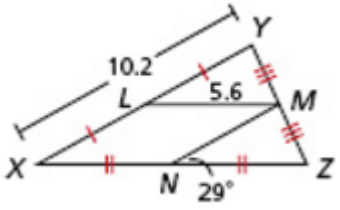
a. The distance from F to $\overline{CD}$ = _____
b. $m\angle FED =$ _____

14. VX = 204 and RW = 104. Find each length:



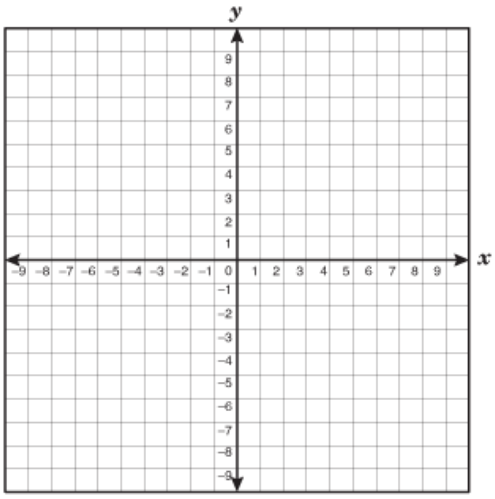
a. VW = _____
b. WX = _____
c. RY = _____
d. WY = _____

15. Use the diagram below to find each measure:

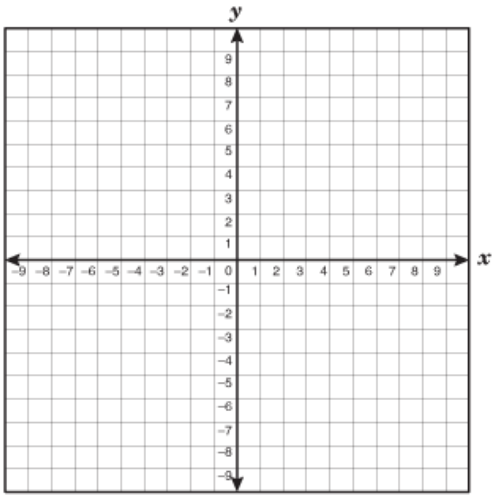


a. NM = _____
b. XZ = _____
c. NZ = _____
d. $m\angle LMN$ = _____
e. $m\angle YXZ$ = _____
f. $m\angle XLM$ = _____

16. Find the orthocenter of the triangle with vertices A(-5, 2), B(-5, 10) and C(1, 4)



17. Find the circumcenter of the triangle with vertices X(1, 6), Y(5, 4) and Z(5, -2)

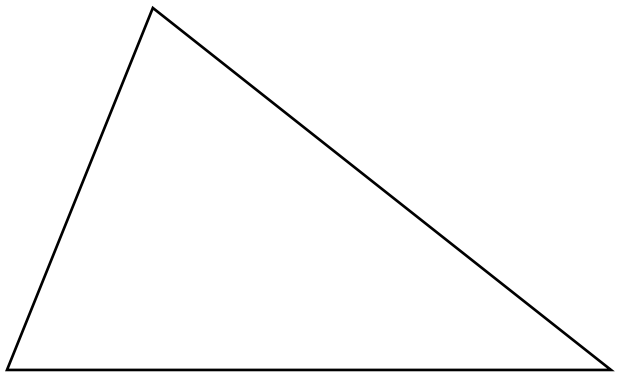


FOR PERFORMANCE TASK:

18. Construct the incenter of the triangle below.

The incenter of the triangle is formed by the _____ of the triangle intersecting.

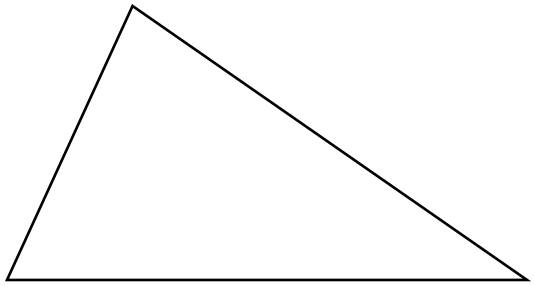
The incenter of the triangle is equidistant from the _____ of the triangle.



19. Construct the circumcenter of the triangle.

The circumcenter of the triangle is formed by the _____ of the triangle intersecting.

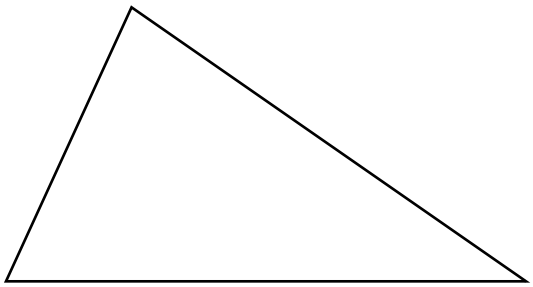
The circumcenter of the triangle is equidistant from the _____ of the triangle.



20. Construct the centroid of the triangle.

The centroid of the triangle is formed by the _____ of the triangle intersecting.

The centroid of the triangle is also known as the _____ of the triangle.



21. Construct the orthocenter of the triangle.

The orthocenter of the triangle is formed by the _____ of the triangle intersecting.