

Geometry A
Segments of Triangles Review

Name: _____
 Block: _____ Date: _____

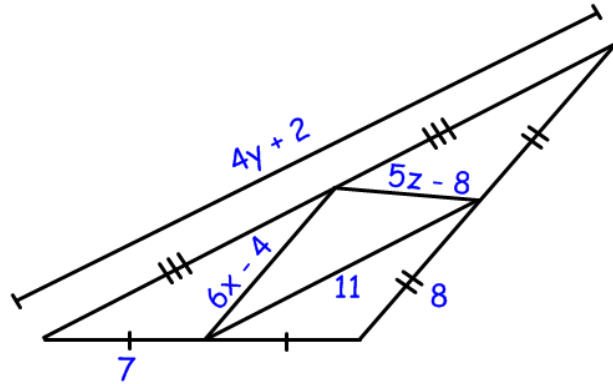
MIDSEGMENTS

1. Solve for x, y, and z

x = _____

y = _____

z = _____



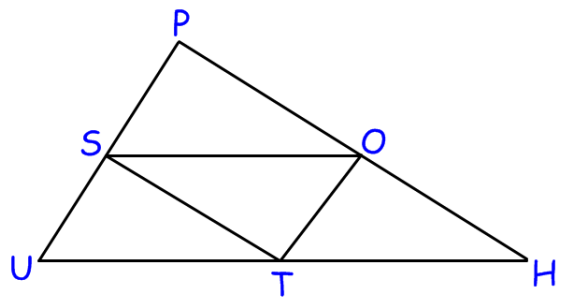
2. Using the given triangles, answer the following.

Name all angles that are congruent to $\angle P$.

Name all segments that are congruent to \overline{UT} .

Name all segments that are congruent to \overline{ST} .

Name all segments that are parallel to \overline{PU} .



MEDIANS

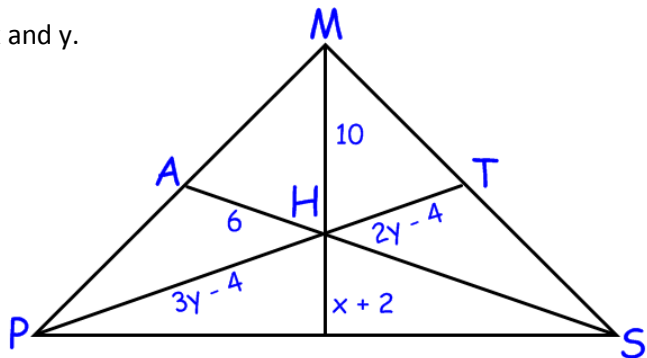
3. What is the name of the point of concurrency of 3 medians? _____

4. H is the centroid of $\triangle MPS$. Find HS and solve for x and y.

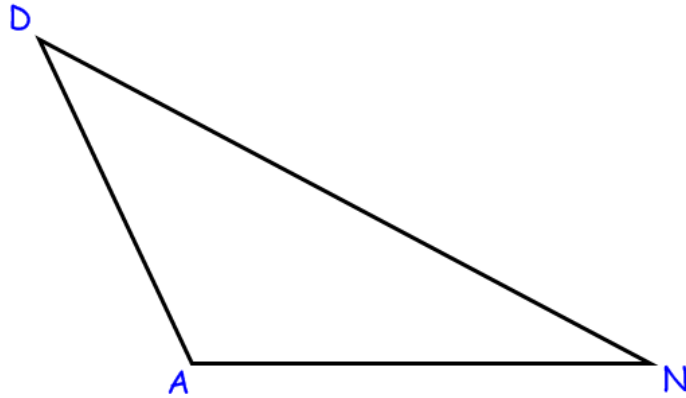
HS = _____

x = _____

y = _____



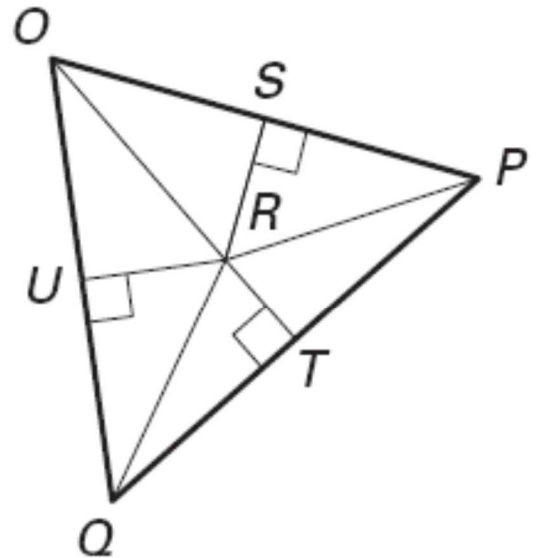
5. Draw all three medians and label everything you know to be congruent.



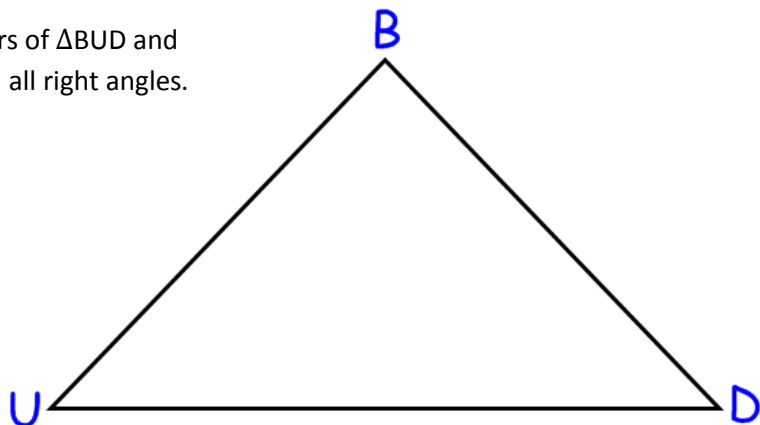
PERPENDICULAR BISECTORS

6. R is the intersection of the perpendicular bisectors of $\triangle OPQ$.
 $OS = 10$, $QR = 12$, and $PQ = 22$.

- a. Find $OP =$ _____
- b. Find $RP =$ _____
- c. Find $OR =$ _____
- d. Find $TP =$ _____
- e. Find $RT =$ _____



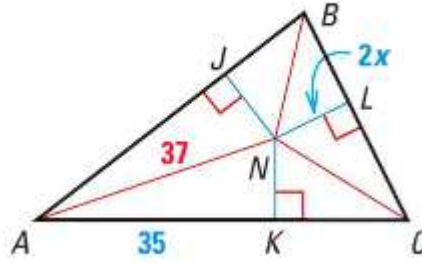
7. Draw all three perpendicular bisectors of $\triangle BUD$ and label any congruent angles or sides and all right angles.



ANGLE BISECTORS

8. \overline{AN} , \overline{CN} , and \overline{BN} are all angle bisectors. Solve for x .

$x = \underline{\hspace{2cm}}$



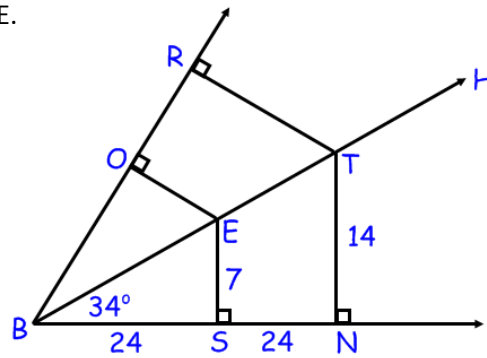
9. \overline{BH} is an angle bisector. Solve for OE, RT, $\angle OBE$, and BE.

OE = $\underline{\hspace{2cm}}$

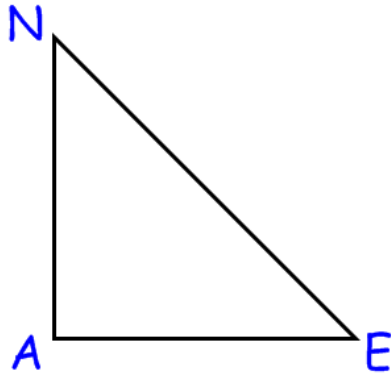
RT = $\underline{\hspace{2cm}}$

$\angle OBE = \underline{\hspace{2cm}}$

BE = $\underline{\hspace{2cm}}$



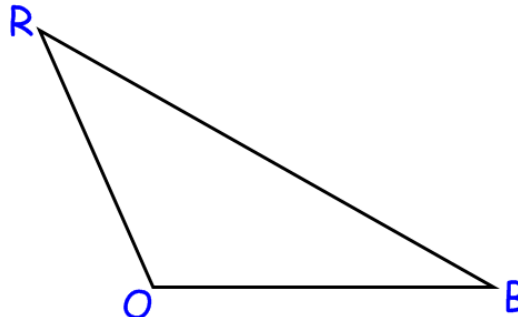
10. Draw all three angle bisectors and label all congruent angles or sides.



ALTITUDES

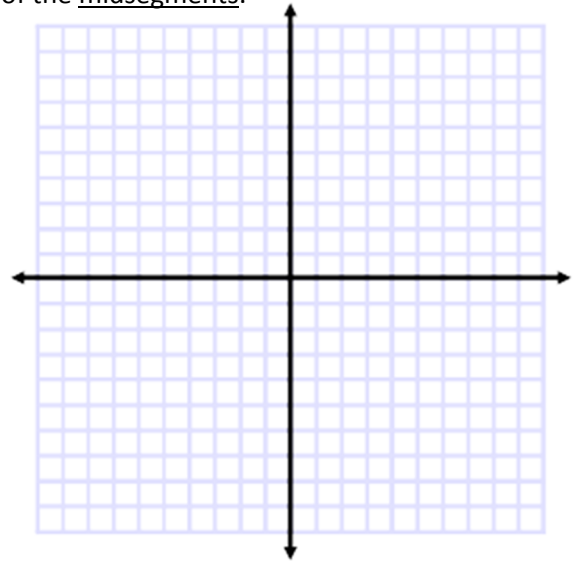
11. What is the name of the point of concurrency of 3 altitudes? $\underline{\hspace{4cm}}$

12. Draw all three altitudes for $\triangle ROB$. Label all right angles.



13. Find the vertices of the triangle given the endpoints of the midsegments.

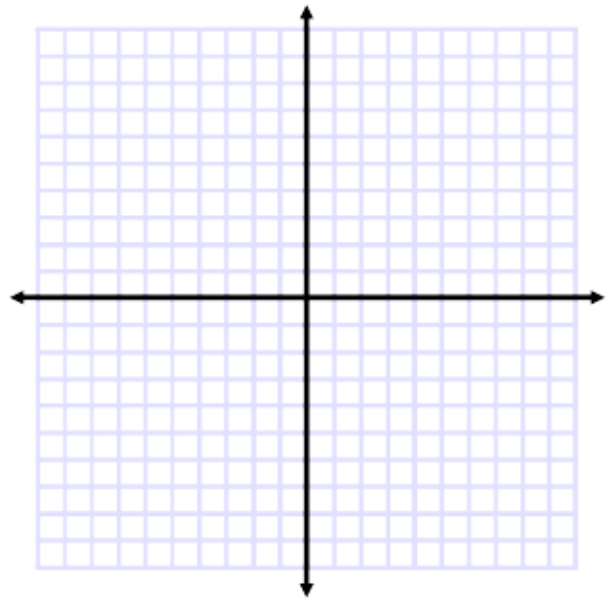
- D(3, -4)
- E(4, -1)
- F(-2, 2)



14. A triangle has the following vertices: A(4, -4), B(2, 8), and C(-6, 2).

a) Find the coordinates of the endpoints of the Midsegment DE.

b) Verify that $DE = \frac{1}{2} AC$.



c) Verify that $\overline{DE} \parallel \overline{AC}$.

Answer each with Sometimes, Always, or Never

15. The point of concurrency of perpendicular bisectors of a right triangle is _____ inside the triangle.

16. The point of concurrency of angle bisectors of a triangle is _____ equidistant from the vertices.

17. The centroid of a triangle is _____ located at the midpoint of each median.

18. For an equilateral triangle an altitude is _____ also an \angle bisector, \perp bisector, and a median.