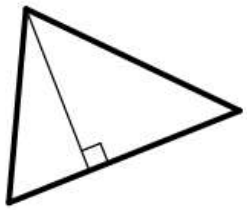
Name:_____ Period:_____ Date:_____

6.2 Incenter and Circumcenter Practice Problems

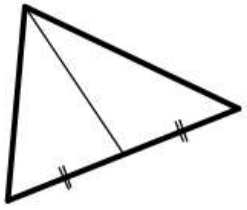
Circle the letter with the name of the segment/line/ray shown.

1.



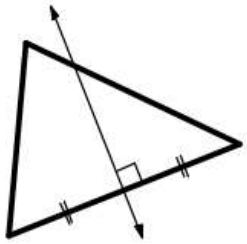
(a) perpendicular bisector
(b) angle bisector
(c) median
(d) altitude

2.



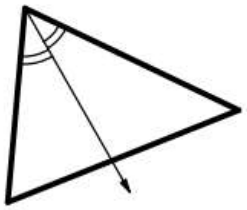
(a) perpendicular bisector
(b) angle bisector
(c) median
(d) altitude

3.



(a) perpendicular bisector
(b) angle bisector
(c) median
(d) altitude

4.



(a) perpendicular bisector
(b) angle bisector
(c) median
(d) altitude

5. Each angle bisector meets at the point of concurrency called the _____.

6. Each perpendicular bisector meets at the point of concurrency called the _____.

7. It is equidistant from the three vertices of the triangle.

(a) circumcenter (b) incenter (c) centroid (d) orthocenter

It is equidistant from the three sides of the triangle.

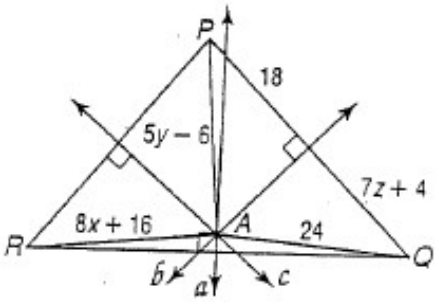
(a) circumcenter (b) incenter (c) centroid (d) orthocenter

ALGEBRA Lines a, b, and c are perpendicular bisectors of $\triangle PQR$ and meet at A.

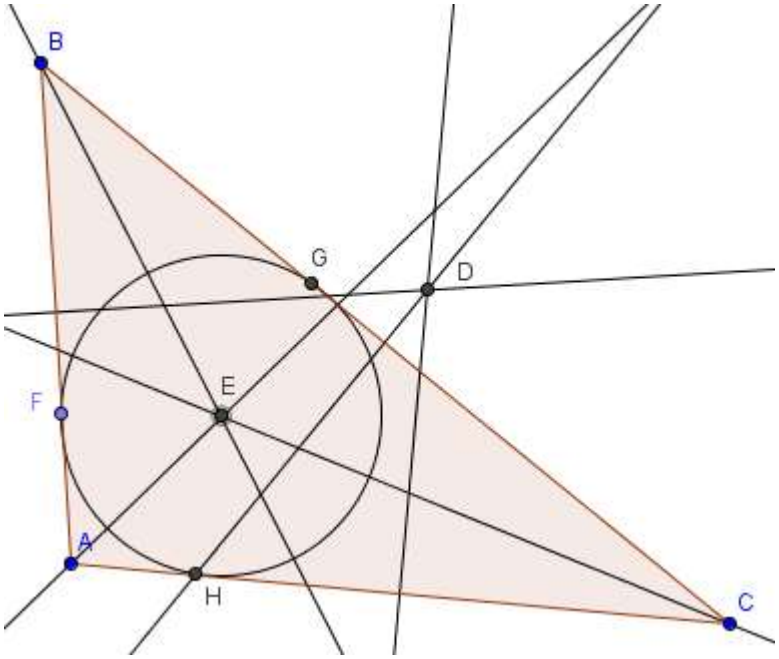
8. Find x.

9. Find y.

10. Find z.



Use the picture on the right for 11-13.
Rays AE, BE, and CE are angle bisectors.
D is the intersection of the perpendicular bisectors.
11) FE = 6x – 7, EH = 35, find EG.



12) AD = 3x + 4y, CD = 9x + y, BD = 11, find x and y.

13) Angle FAE = 10x + 5y, Angle HAE = 10y + 5, BD = x + y, CD = 3x – 1, Find DC and angle FAH.

14) Find the coordinates of the circumcenter of the triangle using graph paper, then check it with geogebra.

A(2, 6) B(8, 6) C(8, 10)