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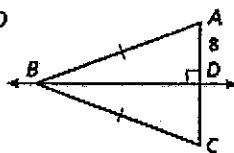
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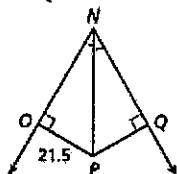
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## HW #5-5: Quiz Review

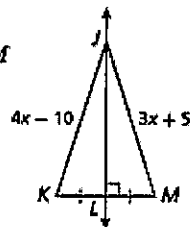
Find each measure.

1.  $CD$ 

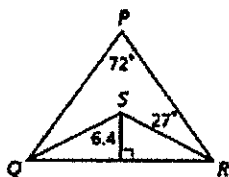
8

2.  $PQ$ 

21.5

3.  $JM$ 

50

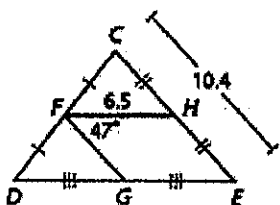
4. Find  $m\angle SQP$ . Then find the distance from S to  $\overline{PR}$ . \*  $\overline{SQ}$  +  $\overline{SR}$  are  $\angle$  bisectors

$$m\angle SQP = 27^\circ$$

$$\text{dist. from S to } \overline{PR} = 6.4$$

\*S is the  
incenter

5. Find:



a.  $FG = 5.2$

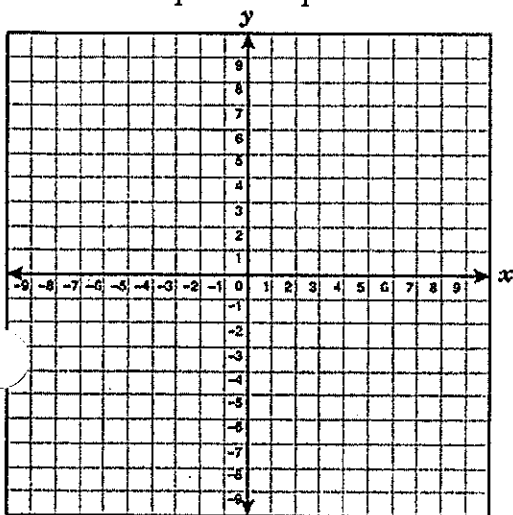
b.  $DE = 13$

c.  $m\angle CED = 47^\circ$

d.  $m\angle FGE = 133^\circ$

e.  $m\angle FGD = 47^\circ$

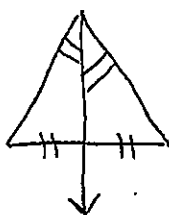
6. Write the equation of the perpendicular bisector of the segment with endpoints (1, 4) and (-5, -2). Write your answer in slope-intercept form.



$$y = -x - 1$$

## Vocab

8. The point of concurrency of the angle bisectors in a triangle is called the incenter
9. The point of concurrency of the perpendicular bisectors in a triangle is called the circumcenter
10. Three or more lines that intersect at one point are called concurrent lines
11. The point where three or more lines intersect is called the point of concurrency
12. A line that passes through the midpoint of a segment and is perpendicular to the segment is called the  $\perp$  bisector of the segment.
13. When a point is the same distance from 2 or more objects, the point is said to be equidistant from the objects.
14. The circumcenter of a triangle is equidistant from the vertices of the triangle.
15. The incenter of a triangle is equidistant from the sides of the triangle.
16. The endpoints of a midsegment of a triangle are the midpoints of the sides of the triangle.
17. The midsegment's length is half the length of the side of the triangle and is always parallel to that side. (hint: use the Triangle Midsegment Theorem to fill in these blanks)
18. When is the incenter located outside the triangle? never
19. When is the circumcenter located on the triangle? when the  $\Delta$  is a right  $\Delta$
20. Can the circumcenter be located outside the triangle? If so, in what case? obtuse  $\Delta$
21. Can an angle bisector of an angle of a triangle also bisect the opposite side of the triangle? If so, draw a diagram to show. If not, explain why not.



## Formulas

22. What is the midpoint formula?  $M = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$
23. What is the slope formula?  $m = \frac{y_2 - y_1}{x_2 - x_1}$
24. What is the slope-intercept form of a line?  $y = mx + b$
25. What is the point-slope form of a line?  $y - y_1 = m(x - x_1)$
26. What is the distance formula?  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$