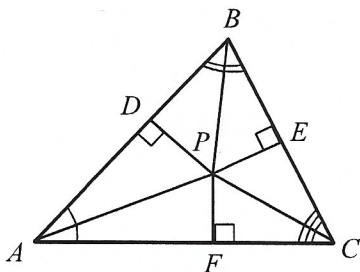


Incenter



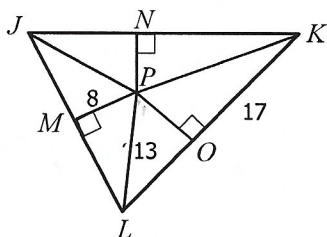
- The _____ of the angles of a triangle intersect at a point called the **incenter**.
- The incenter is always equidistant from the _____ of the triangle.

Use the diagram to the left to answer the following questions:

- 1) List the angle bisectors: _____
- 2) Name the incenter: _____
- 3) List all congruent segments: _____

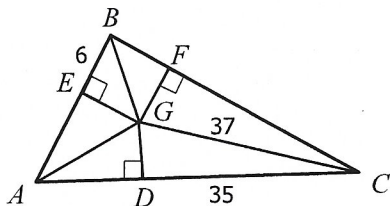
Practice!

1. If P is the incenter of $\triangle JKL$, find each missing measure.



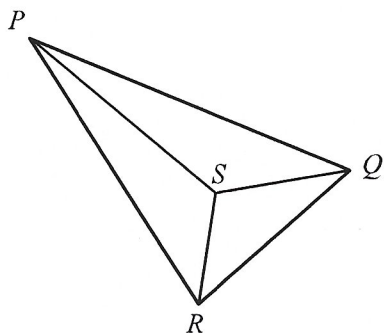
- a) $NP =$ _____
- b) $NK =$ _____
- c) $PK =$ _____
- d) $LO =$ _____

2. If G is the incenter of $\triangle ABC$, find each missing measure.



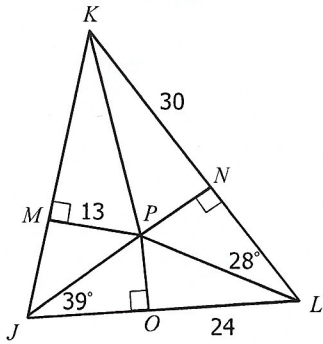
- a) $GD =$ _____
- b) $BG =$ _____
- c) $FC =$ _____
- d) $BF =$ _____

3. If S is the incenter of $\triangle PQR$, $m\angle PRQ = 8x - 10$, $m\angle RPQ = 4x - 14$, and $m\angle PQR = 7x - 5$, find each missing measure.



- a) $m\angle PRQ =$ _____
- b) $m\angle RPQ =$ _____
- c) $m\angle PQR =$ _____
- d) $m\angle RPS =$ _____
- e) $m\angle PQS =$ _____
- f) $m\angle PRS =$ _____
- g) $m\angle PSR =$ _____

Directions: If P is the incenter of $\triangle JKL$, find each measure.



11. $m\angle MJP$

12. $m\angle JKL$

13. $m\angle NKP$

14. $m\angle KLJ$

15. NP

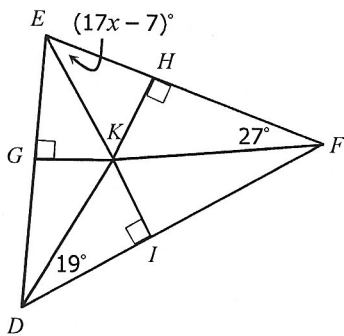
16. KM

17. KP

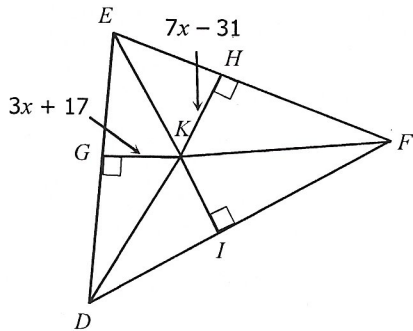
18. PL

Directions: If K is the incenter of $\triangle DEF$, find each measure.

19. Find x .



20. Find KI .



21. Find DK .

