Name _____ Date _____

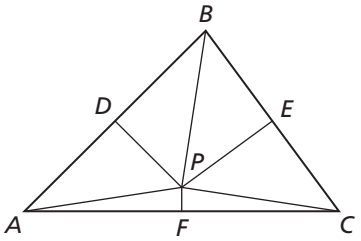
6.2 Notetaking with Vocabulary (continued)

Theorems

Theorem 6.5 Circumcenter Theorem

The circumcenter of a triangle is equidistant from the vertices of the triangle.

If $\overline{PD}$, $\overline{PE}$, and $\overline{PF}$ are perpendicular bisectors, then $PA = PB = PC$.

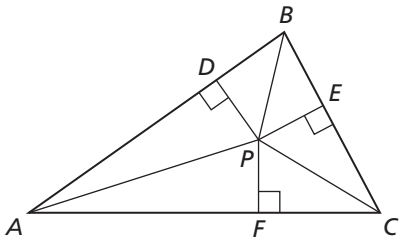


Notes:

Theorem 6.6 Incenter Theorem

The incenter of a triangle is equidistant from the sides of the triangle.

If $\overline{AP}$, $\overline{BP}$, and $\overline{CP}$ are angle bisectors of $\triangle ABC$, then $PD = PE = PF$.

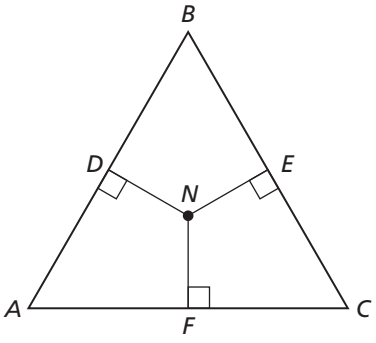


Notes:

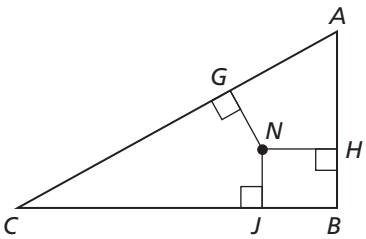
Extra Practice

In Exercises 1–3, *N* is the incenter of $\triangle ABC$. Use the given information to find the indicated measure.

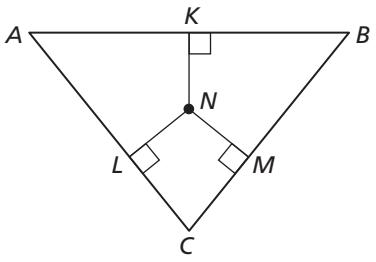
1. $ND = 2x - 5$
$NE = -2x + 7$
Find NF.



2. $NG = x - 1$
$NH = 2x - 6$
Find NJ.



3. $NK = x + 10$
$NL = -2x + 1$
Find NM.

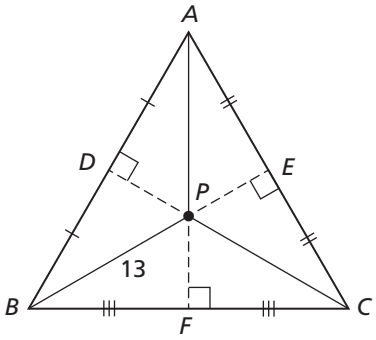


Name_____ Date _____

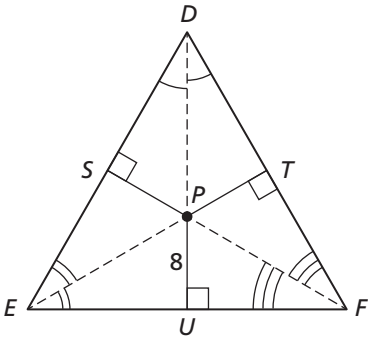
6.2 Notetaking with Vocabulary (continued)

In Exercises 4–7, find the indicated measure.

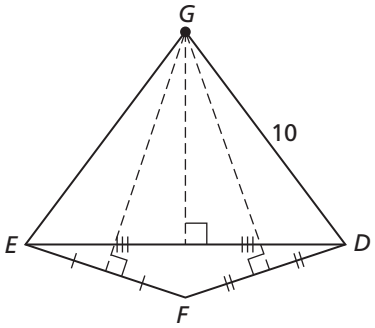
4. PA



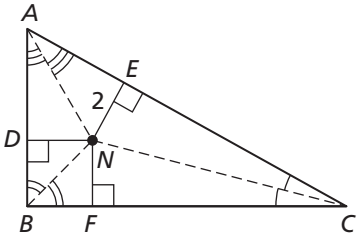
5. PS



6. GE



7. NF



In Exercises 8–10, find the coordinates of the circumcenter of the triangle with the given vertices.

8. $A(-2, -2), B(-2, 4), C(6, 4)$ **9.** $D(3, 5), E(3, 1), F(9, 5)$ **10.** $J(4, -7), K(4, -3), L(-6, -3)$