**19.** The largest two angles of a triangle are two and three times as large as the smallest angle. Find all three measures.

20. The measure of one angle of a triangle is 28 more than the measure of the smallest angle of the triangle. The measure of the third angle is twice the measure of the smallest angle. Find all three measures.

21. In $\triangle ABC$, $m \angle A = 60$ and $m \angle B < 60$. What can you say about $m \angle C$?

22. In $\triangle RST$, $m \angle R = 90$ and $m \angle S > 20$. What can you say about $m \angle T$?

23. Given: $\overline{AB} \perp \overline{BC}$; $\overline{BD} \perp \overline{AC}$
   a. If $m \angle C = 22$, find $m \angle ABD$.
   b. If $m \angle C = 23$, find $m \angle ABD$.
   c. Explain why $m \angle ABD$ always equals $m \angle C$.

24. The bisectors of $\angle EFG$ and $\angle EGF$ meet at I.
   a. If $m \angle EFG = 40$, find $m \angle FIG$.
   b. If $m \angle EFG = 50$, find $m \angle FIG$.
   c. Generalize your results in (a) and (b).
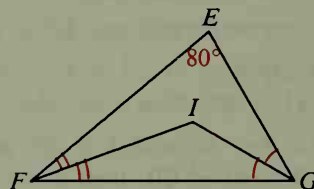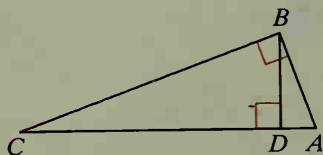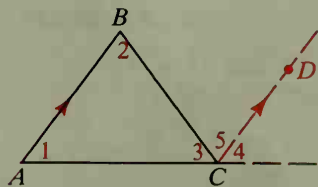

25. Given: $\angle ABD \cong \angle AED$
   Prove: $\angle C \cong \angle F$
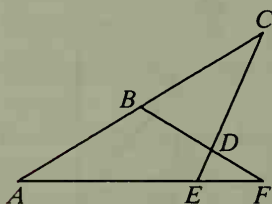
26. Find the measures of $\angle 1$ and $\angle 2$.
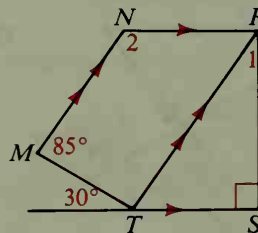
27. Prove Theorem 3-11 by using the diagram below. (Begin by stating what is given and what is to be proved. Draw the auxiliary ray shown.)

28. Given: $\overrightarrow{GK}$ bisects $\angle JGI$;
       $m \angle H = m \angle I$
   Prove: $\overline{GK} \parallel \overline{HI}$