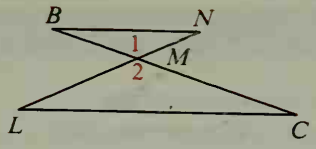
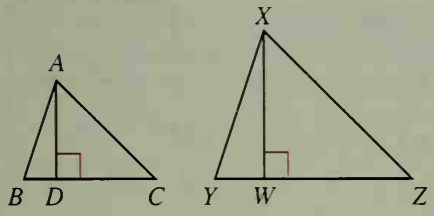
23. Given: $\angle B \cong \angle C$
Prove: $NM \cdot CM = LM \cdot BM$

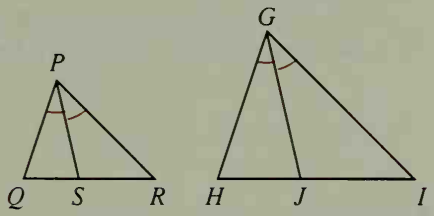
24. Given: $\overline{BN} \parallel \overline{LC}$
Prove: $BN \cdot LM = CL \cdot NM$



25. Given: $\triangle ABC \sim \triangle XYZ$;
$\overline{AD}$ and $\overline{XW}$ are altitudes.
Prove: $\frac{AD}{XW} = \frac{AB}{XY}$

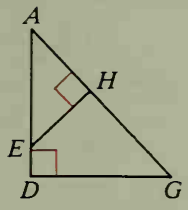
26. Given: $\triangle PQR \sim \triangle GHI$;
$\overrightarrow{PS}$ and $\overrightarrow{GJ}$ are angle bisectors.
Prove: $\frac{PS}{GJ} = \frac{PQ}{GH}$

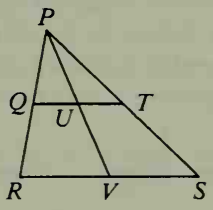




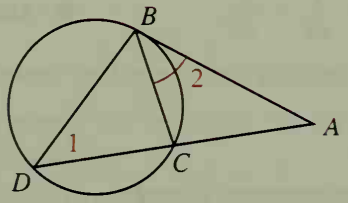
27. Given: $\overline{AH} \perp \overline{EH}$; $\overline{AD} \perp \overline{DG}$
Prove: $AE \cdot DG = AG \cdot HE$

28. Given: $\overline{QT} \parallel \overline{RS}$
Prove: $\frac{QU}{RV} = \frac{UT}{VS}$





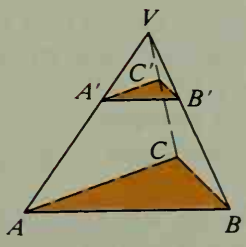
29. Given: $\angle 1 \cong \angle 2$
Prove: $(AB)^2 = AD \cdot AC$



In the diagram for Exercises 30 and 31, the plane of $\triangle A'B'C'$ is parallel to the plane of $\triangle ABC$.

30. $VA' = 15$ and $A'A = 20$
a. If $VC' = 18$, then $VC =$ ___?___.
b. If $VB = 49$, then $BB' =$ ___?___.
c. If $A'B' = 24$, then $AB =$ ___?___.

31. If $VA' = 10$, $VA = 25$, $AB = 20$, $BC = 14$, and $AC = 16$, find the perimeter of $\triangle A'B'C'$.



C **32.** Two vertical poles have heights 6 ft and 12 ft. A rope is stretched from the top of each pole to the bottom of the other. How far above the ground do the ropes cross? (*Hint*: The lengths y and z do not affect the answer.)