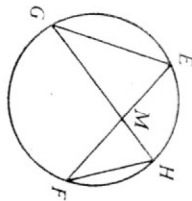


15. Given: $\angle G \cong \angle F$.

Prove: $\frac{GE}{FH} = \frac{ME}{MH}$.

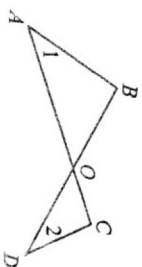
16. Given: $m\angle E = x$; $m\angle H = x$.
Prove: $\frac{GM}{FM} = \frac{GE}{FH}$.



Exs. 15, 16

17. Given: $\overline{RS} \parallel \overline{AC}$.

Prove: $\triangle ABC \sim \triangle RBS$.



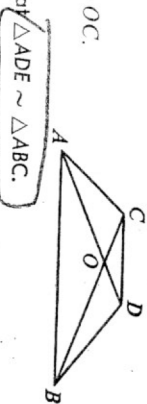
Ex. 18

18. Given: $\angle 1 \cong \angle 2$.

Prove: $\triangle AOB \sim \triangle DOC$.

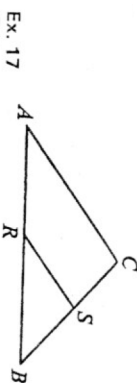
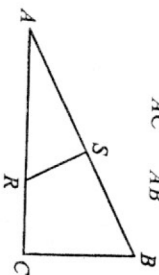
20. Given: $\overline{CD} \parallel \overline{AB}$.

Prove: $OB \cdot OD = OA \cdot OC$.



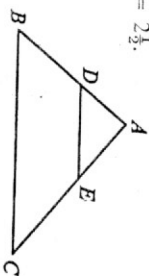
Ex. 19

19. Given: $\overline{BC} \perp \overline{AC}$, $\overline{RS} \perp \overline{AB}$.
Prove: $\frac{AS}{AC} = \frac{AR}{AB}$.



Ex. 17

In Exercises 21–24 it is given that $\triangle ADE \sim \triangle ABC$.
EXAMPLE. $AB = 6$, $AD = 2$, and $EC = 2\frac{1}{2}$.
Find AE .



TM p. 41, 8.4(2)

WRITTEN EXERCISES

- A**
- If two similar triangles have one pair of corresponding sides congruent, are the triangles congruent?
 - What is the ratio of the lengths of the sides of two squares with perimeters 8 in. and 12 in. respectively?

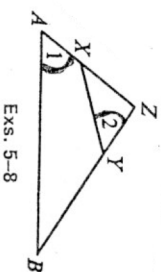
- If $\frac{AB}{XY} = \frac{BC}{YZ} = \frac{CA}{ZX}$, must it be true that $\frac{XY}{AB} = \frac{YZ}{BC} = \frac{ZX}{CA}$?
- If $RS \cdot VW = TQ \cdot NI$, must it be true that $\frac{RS}{TQ} = \frac{VW}{NI}$?

In Exercises 5–8, ABZ is a triangle, and $\angle 1 \cong \angle 2$.

- Name two triangles that are similar.
- Complete this proportion:

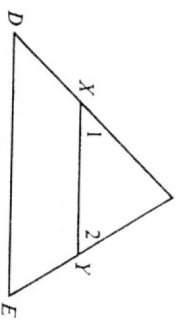
$$\frac{XY}{?} = \frac{ZY}{?} = \frac{XZ}{?}$$

- If $XY = 4$, $BZ = 10$, and $ZY = 2$, find ZA .
- If $ZX = 3$, $ZB = 5$, and $ZY = 2$, find ZA .



Exs. 5–8

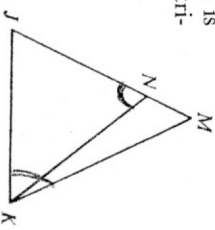
- Given: $\angle 1 \cong \angle D$.
Prove: $\triangle FXY \sim \triangle FDE$.
- Given: $m\angle 2 = j$; $m\angle E = j$.
Prove: $\triangle FXY \sim \triangle FDE$.



Exs. 9, 10

- Emphasize
- Prove: If two triangles are congruent, they are similar.
 - Prove: If a base angle of one isosceles triangle is congruent to a base angle of another isosceles triangle, the triangles are similar.

- Given: $\angle JNK \cong \angle JKM$.
Prove: $\triangle KNJ \sim \triangle MKJ$.
- Given: $MJ = MK$; $KN = KJ$.
Prove: $\triangle NKM \sim \triangle KJM$.



Exs. 13, 14