

LESSON

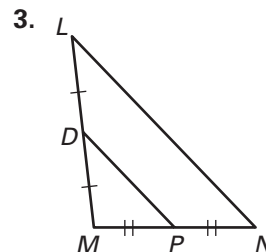
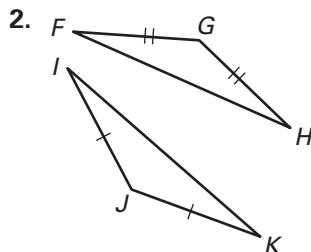
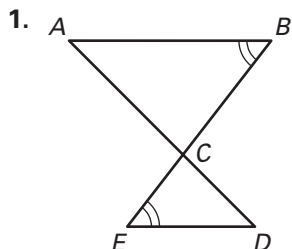
8.5

NAME _____ DATE _____

Practice C

For use with pages 488–496

Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer.

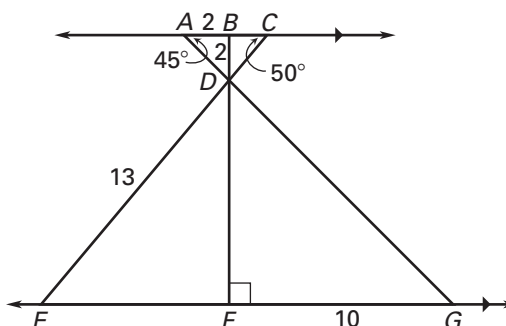


Draw the given triangles roughly to scale. Then, name a postulate or theorem that can be used to prove that the triangles are similar.

- In $\triangle ABC$, $m\angle A = 38^\circ$ and $m\angle B = 94^\circ$. In $\triangle XYZ$, $m\angle Y = 94^\circ$ and $m\angle Z = 48^\circ$.
- The ratio of AB to XY is 2:3. In $\triangle ABC$, $m\angle B = 75^\circ$, and in $\triangle XYZ$, $m\angle Y = 75^\circ$. The ratio of BC to YZ is 2:3.
- In $\triangle ABC$, $m\angle B = 50^\circ$, $AB = 4$, and $BC = 9$. In $\triangle XYZ$, $m\angle Y = 50^\circ$, $XY = 2$ and $YZ = 4.5$.

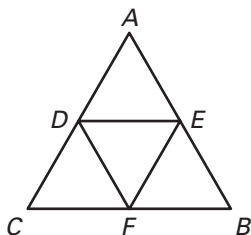
Use the diagram shown to complete the statements.

- $m\angle DGE = \underline{\hspace{1cm}} ? \underline{\hspace{1cm}}$
- $m\angle EDG = \underline{\hspace{1cm}} ? \underline{\hspace{1cm}}$
- $FD = \underline{\hspace{1cm}} ? \underline{\hspace{1cm}}$
- $GD = \underline{\hspace{1cm}} ? \underline{\hspace{1cm}}$
- $EG = \underline{\hspace{1cm}} ? \underline{\hspace{1cm}}$
- Name the three pairs of triangles that are similar in the figure.



Write a paragraph or a two-column proof.

13. **Given:** $\triangle ABC$ is equilateral.
 $\overline{DE}$, $\overline{DF}$, $\overline{EF}$ are midsegments.
Prove: $\triangle ABC \sim \triangle FED$



14. **Given:** $ABCD$ is a trapezoid with $\overline{AD}$ and $\overline{BC}$ as bases.
Prove: $\triangle EAD \sim \triangle EBC$

