

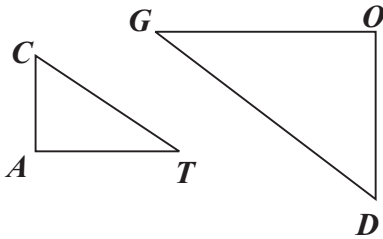
Guided Practice 8.6

NAME _____

Module 8 Points, Lines, Angles, and Triangles
Lesson 6 Similar Triangles

Set 1

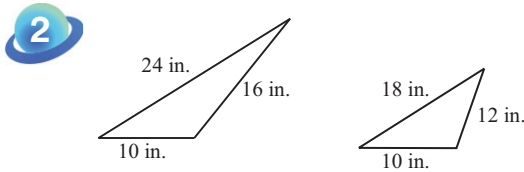
- 1 $\triangle CAT \sim \triangle DOG$
Which angles are congruent? Which sides are proportional?



$$\angle C \cong \angle D \quad \angle A \cong \angle O \quad \angle T \cong \angle G$$

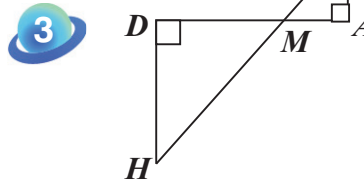
$$\begin{aligned} \overline{CA} &\text{ proportional to } \overline{DO} \\ \overline{AT} &\text{ proportional to } \overline{OG} \\ \overline{CT} &\text{ proportional to } \overline{DG} \end{aligned}$$

Determine if the triangles are similar. Explain why or why not. If so, write the similarity statement.



$$\frac{24}{18} = \frac{4}{3}, \quad \frac{16}{12} = \frac{4}{3}, \quad \frac{10}{10} = 1$$

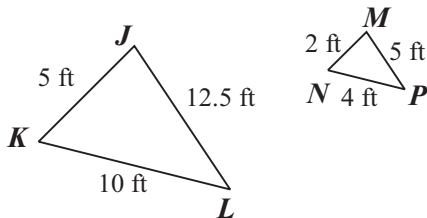
No: Sides are not proportional.



$$\angle D \cong \angle A \text{ and } \angle DMH \cong \angle AMR$$

AA Similarity Rule
 $\triangle DMH \sim \triangle AMR$

- 4 Determine if $\triangle JKL \sim \triangle MNP$.

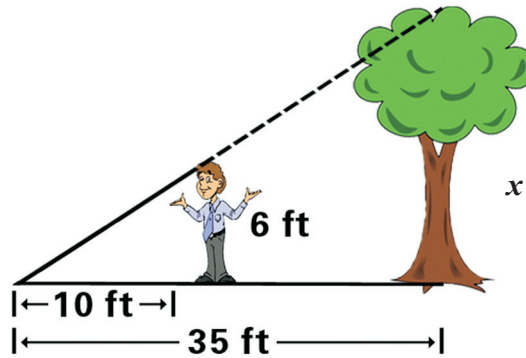


$$\frac{10}{4} = \frac{5}{2}, \quad \frac{12.5}{5} = \frac{5}{2}, \quad \frac{5}{2}$$

$\triangle JKL \sim \triangle MNP$
Yes: SSS Similarity Rule

Set 2

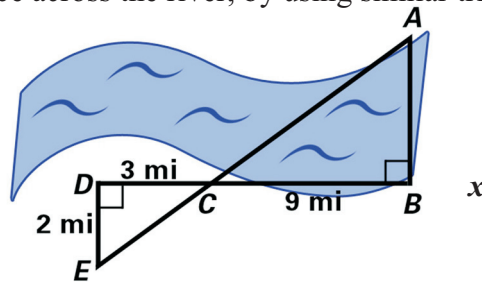
- 1 Isaac used his shadow and a tree's shadow to estimate the height of the tree. Use the diagram to estimate the height of the tree.



$$\begin{aligned} \frac{\text{shadow}}{\text{height}} &: \frac{10}{6} = \frac{35}{x} \\ 10 \times x &= 6 \times 35 \\ 10 \times x &= 210 \\ x &= 21 \end{aligned}$$

About 21 ft high

- 2 Find AB , the distance across the river, by using similar triangles.



$$\triangle DEC \sim \triangle BAC$$

$$\begin{aligned} \frac{DE}{BA} &= \frac{DC}{BC} \\ \frac{2}{x} &= \frac{3}{9} \\ x &= 6 \\ AB &= 6 \text{ miles} \end{aligned}$$