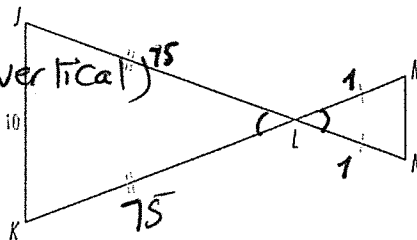


Solve for MN

1- Are the given two triangle similar? Justify

yes, by SAS $\rightarrow \angle JLK \cong \angle NLM$ (vertical)
 $\frac{75}{1} = \frac{75}{1}$



2- What part of the figure are you solving for?

Side MN

3- Which property of similar figures are you using?

Corresponding sides are proportional.

4- Set Up Equations/Proportions (May vary)

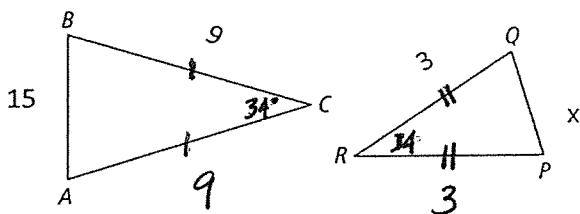
$$\frac{MN}{10} = \frac{1}{75}$$

5- Solve

$$\frac{75}{75} MN = \frac{10}{75}$$

$$MN = 0.\overline{13}$$

Solve for QP



1- Are the given two triangle similar? Justify

yes, by SAS $\rightarrow \angle C \cong \angle R$
 $\frac{9}{3} = \frac{9}{3}$ ✓

2- What part of the figure are you solving for?

QP

3- Which property of similar figures are you using?

Corresponding sides are proportional

4- Set Up Equations/Proportions

$$\frac{x}{15} = \frac{3}{9}$$

5- Solve

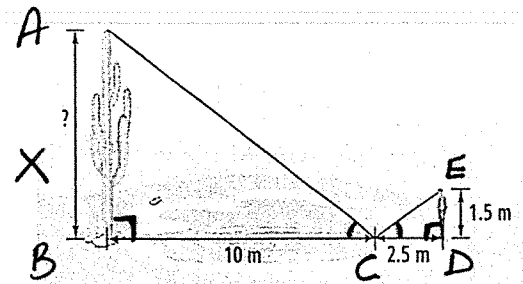
$$\frac{9x}{9} = \frac{45}{9}$$

$$x = 5 = QP$$

A cactus casts a reflection in a puddle at the same time when Ahmad's reflections was also casted. Based on the given measurements in the picture, find the height of the tree.

- 1- Are the given two triangle similar? Justify

yes, by AA $\angle B \cong \angle D$
 $\angle BCA \cong \angle DCE$



- 2- What part of the figure are you solving for?

height of the tree = AB.

- 3- Which property of similar figures are you using?

Corresponding sides are proportional

- 4- Set Up Equations/Proportions

$$\frac{X}{1.5} = \frac{10}{2.5}$$

- 5- Solve

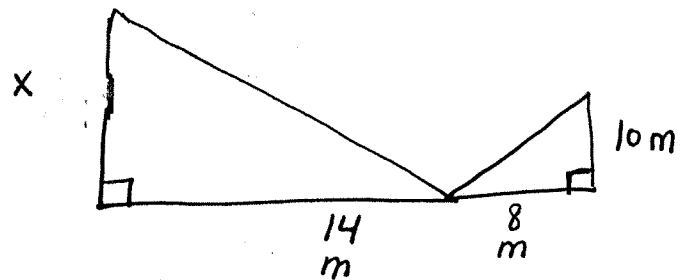
$$\frac{2.5}{2.5} X = \frac{15}{2.5}$$

$$X = 6 = \text{height of the tree}$$

A telephone pole is 10 meters tall casts a shadow 8 meter long at the same time a tree nearby casts a shadow 14 meters long. Find the height of the tree.

- 1- Are the given two triangle similar? Justify

yes, by AA



- 2- What part of the figure are you solving for?

height of the tree

- 3- Which property of similar figures are you using?

Corresponding sides are proportional

- 4- Set Up Equations/Proportion

$$\frac{X}{10} = \frac{14}{8}$$

- 5- Solve

$$\frac{8X}{8} = \frac{140}{8} = 17.5 \text{ (height of the tree)}$$