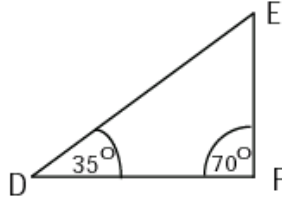
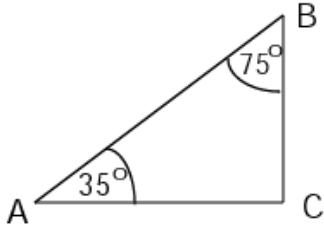
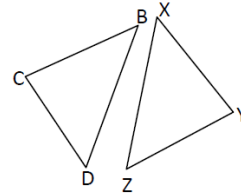


1. State whether or not the following triangles are similar and support your answer.



2. In the figure given to the left, $\triangle XYZ$ is similar to $\triangle BCD$.

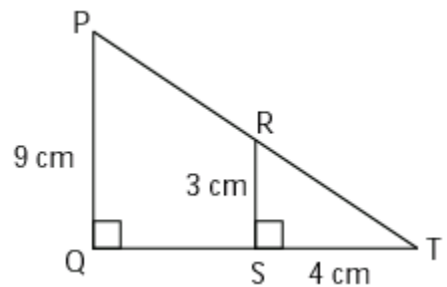
a. Find the value of XZ.

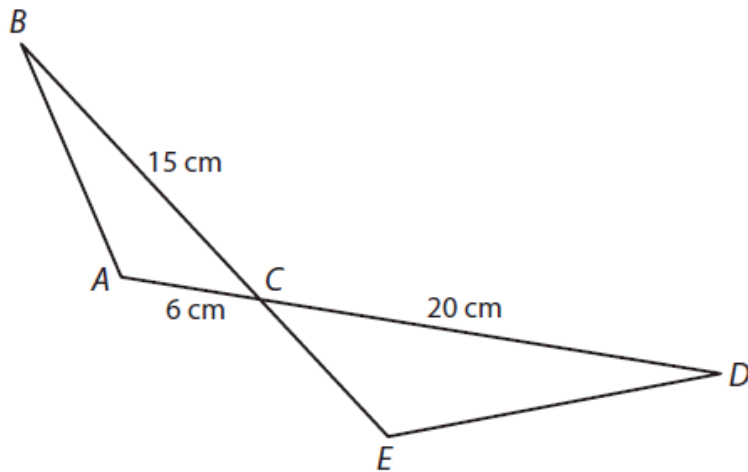


b. Find the value of CD

3. Looking at the triangles in the figure on the right:

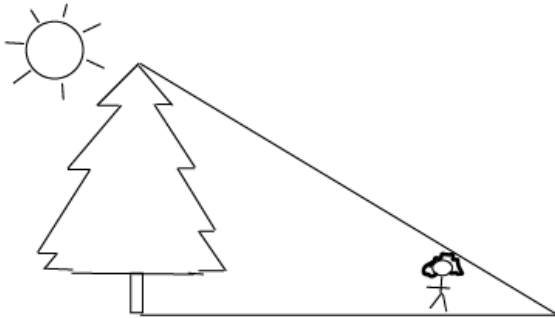
- Are the two triangles similar?
- What is the length of QT?
- If PT is 15 cm, what is the length of RT?





4. In the diagram to the left,
 $\triangle ACB \sim \triangle ECD$. Find the length of
 \overline{CE} .

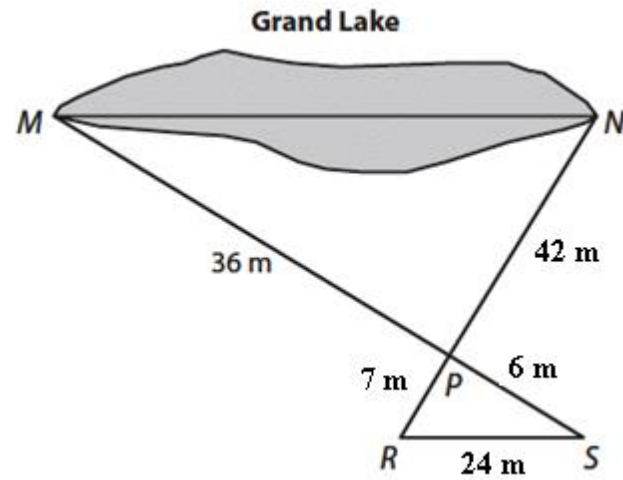
5. Tonya is 1.3 meters tall. She stands 7 meters in front of a tree and casts a shadow 1.8 meters long. How tall is the tree?



6. Stephanie casts a shadow of 1.2 m and she is 1.8 m tall. A wind turbine casts a shadow of 10 m at the same time that Stephanie measured her shadow. Draw a diagram of this situation and then calculate how tall the wind turbine is.

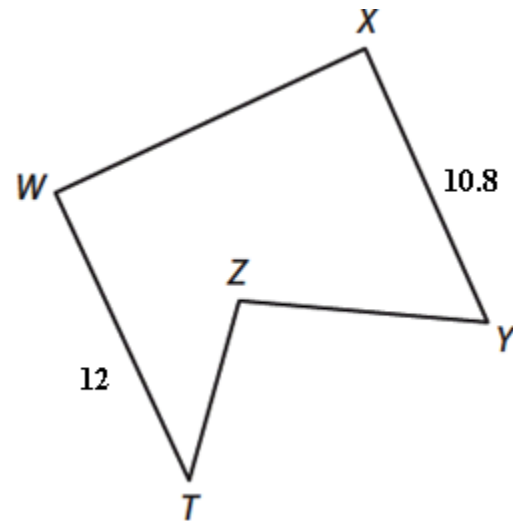
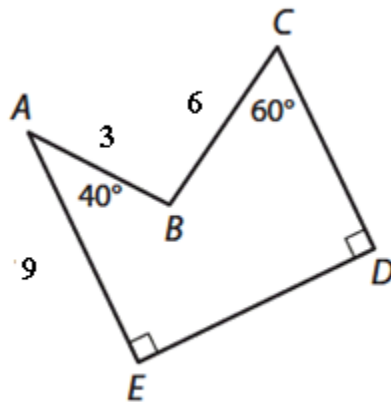
7. Maya needed to determine the longest distance across Grand Lake. She made the measurements as shown in the diagram.

a. Provide an argument to justify that $\triangle NPM \sim \triangle RPS$.



b. Determine MN , the longest distance across Grand Lake.

8. In the diagrams below, *pentagon* $ABCDE \sim$ *pentagon* $TZYXW$.



a. Use the information provided to determine each measure.

i. $m\angle T =$ _____

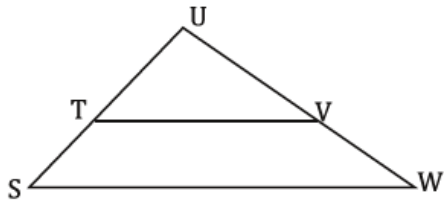
ii. $ZY =$ _____

iii. $CD =$ _____

b. What is the scale factor from pentagon $TZYXW$ to pentagon $ABCDE$? Explain your reasoning.

9.

Given: $\angle S \cong \angle UTV$

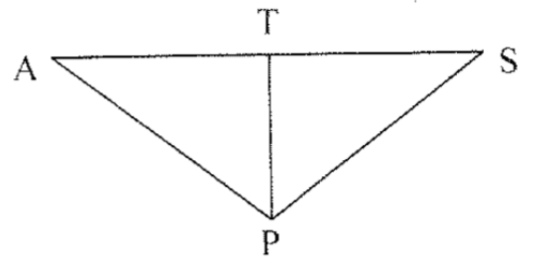


Prove: $\triangle SUW \sim \triangle TUV$

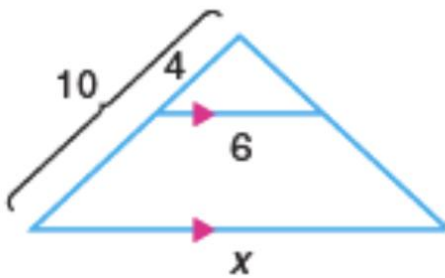
10.

Given: $\overline{TP} \perp \overline{AS}$, $\overline{AP} \cong \overline{SP}$

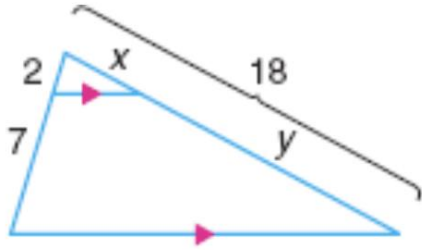
Prove: $\triangle ATP \cong \triangle STP$



11. Solve for x.



12. Solve for x and y.



13. . Given: $\overline{AC} \cong \overline{DE}$; $\overline{AB} \cong \overline{DF}$;
 $\angle CAB \cong \angle EDF$
Prove: $\overline{CB} \cong \overline{EF}$

