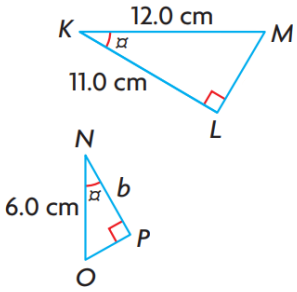
MFM 2P1 Name:_____

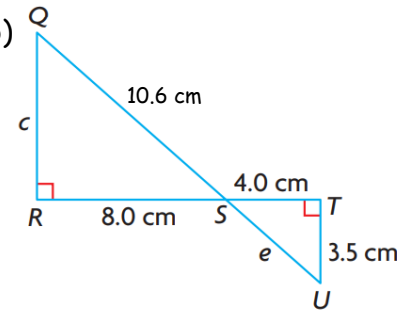
Solving Similar Triangles

1. Determine the value of each lower-case letter.

a)



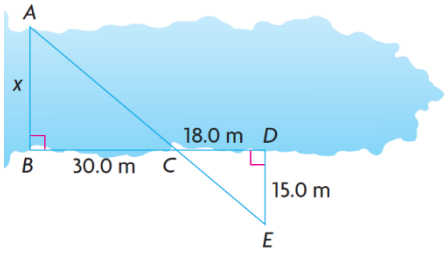
b)



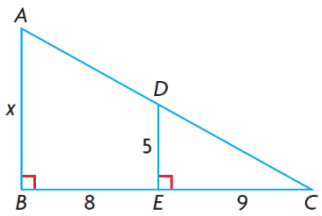
2. Nora, who is 172.0 cm tall, is standing near a tree. Nora's shadow is 3.2 m long. At the same time, the shadow of the tree is 27.0 m long. How tall is the tree?

3. Suppose that $\triangle PQR \sim \triangle LMN$ and $\angle P = 90^\circ$.
   a) What angle in $\triangle LMN$ equals 90°? How do you know?
   b) If $MN = 13$ cm, $LM = 5$ cm, and $PQ = 15$ cm, what is the length of QR?

4. How wide is this bay?



5. Determine the value of x.



6. The shadow of a metre stick is 1.8 m in length when the shadow of a building is 106 m. Draw an appropriate diagram, then calculate the height of the building.

7. The following procedure can be used to calculate the height of a building or a tree. A mirror is placed on the ground so that the reflection of the top of the building is seen. Use the measures in the diagram to calculate the height of the building.