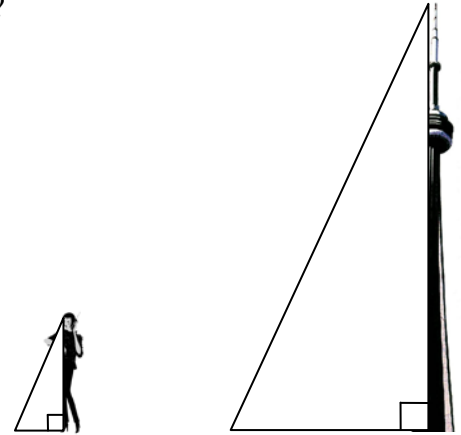


Worksheet 2-2: Applications of Similar Triangles

1. The case of Ms. Chor vs. CN Tower:

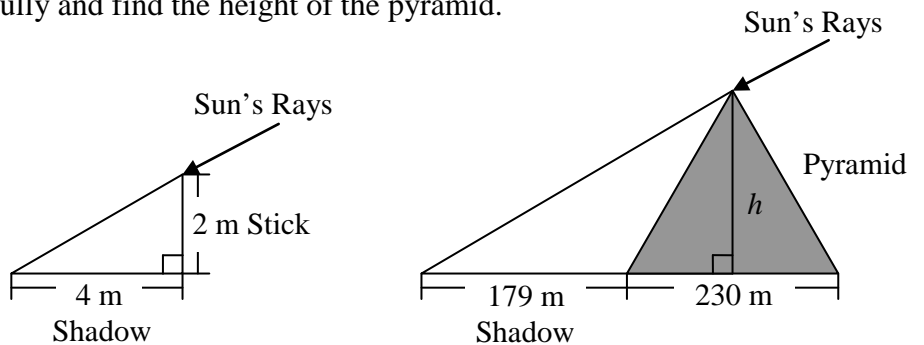
At a certain time of the day, Ms. Chor was standing right alongside the CN Tower in downtown Toronto. Imagine that there were nothing else on the plain. There were just Ms. Chor and the CN Tower standing in downtown Toronto. The parallel sun's rays shined on them at the same time. Ms. Chor cast a shadow that was 0.5 m long whereas the CN Tower cast a shadow that was 158 m long. What is the height of the CN Tower if Ms. Chor is 1.75 m tall?

Label the given diagrams to help you solve!



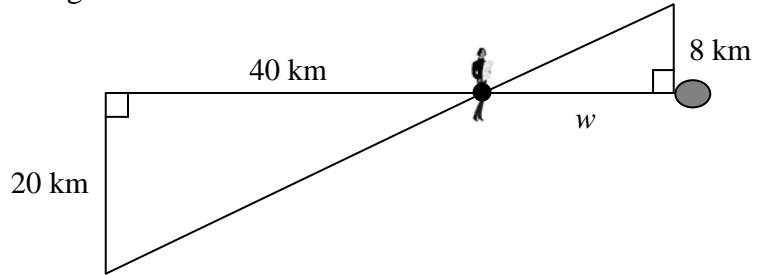
2. The Pyramid Mystery:

Study the following figures carefully and find the height of the pyramid.

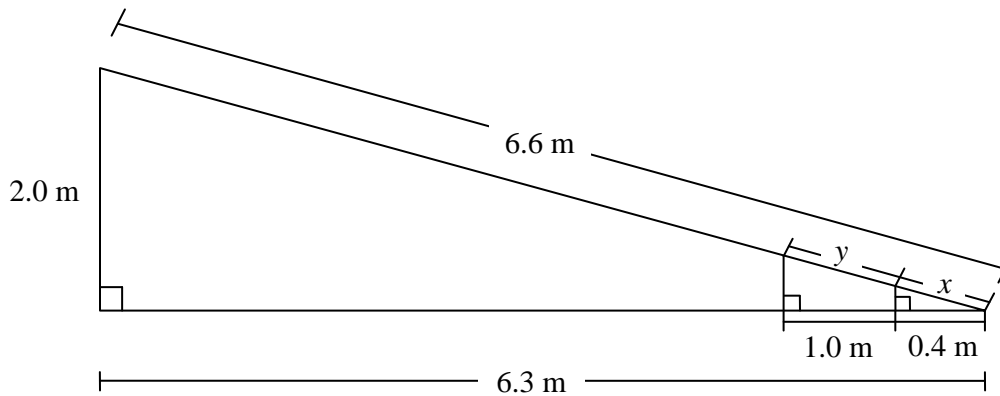


3. The Wonder of the Grand Canyon in Arizona, USA:

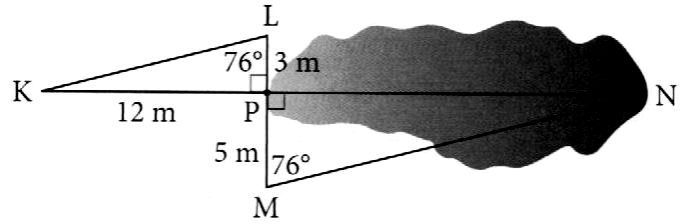
The greatest width of the Grand Canyon is 29 km while the smallest width is 8 km. One day a surveyor stopped by a certain point of the canyon and saw a rock on the other side of the canyon. He wondered what the width of the Grand Canyon was between the rock and where he was standing. He took some measurements and drew the following diagram. Can you help him find the width between the rock and where he was standing?



4. A Similar Triangle Challenge: Find the lengths of x and y , to the nearest hundredth of a metre.



5. To find the length of a pond, a surveyor took some measurements. She recorded them on the given diagram. What is the length of the pond?



6. Elizabeth's eyes are 150 cm from the floor. She places a mirror on the floor 18 m from the base of a climbing wall. She walks backward 120 cm, until she sees the top of the wall in the mirror. What is the height of the climbing wall? (Hint: Make sure all measurements are in same units.)

