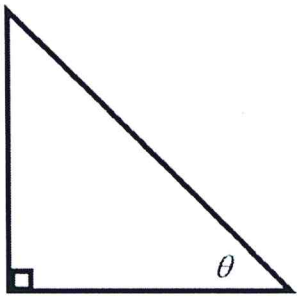
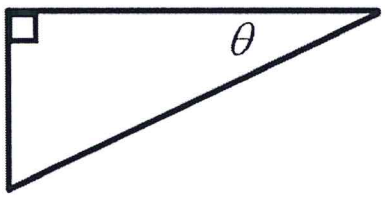
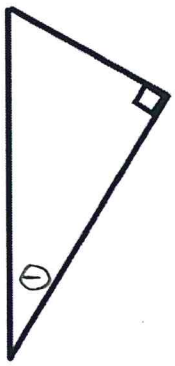
STATION A

1. Label each of the triangles with hypotenuse, opposite and adjacent for the indicated angle.







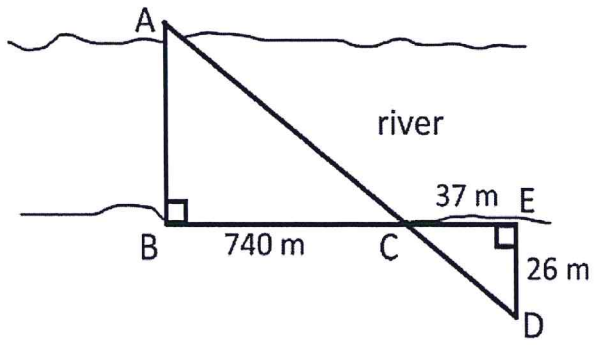
2. a) Determine the value of sin 44°.

b) Determine the angle if cos C = 0.5983.

STATION B

1) The following is a diagram of the Ottawa river. Since it is not possible to measure the distance across the river directly, indirect measurement must be used, as shown.

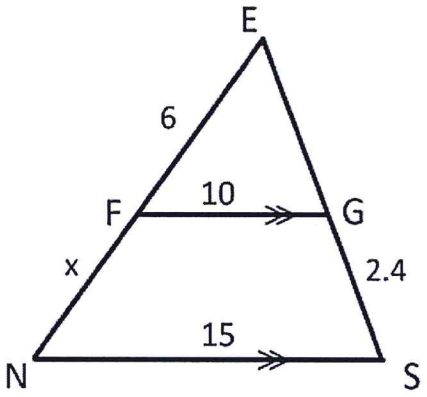
a) Prove that the two triangles are similar.



b) Using similar triangles, compute the distance across the river.

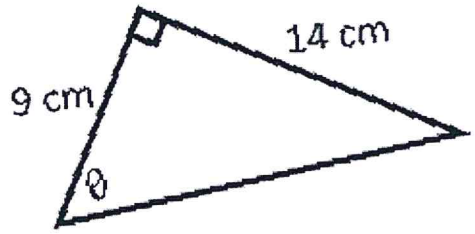
STATION C

Given that the two triangles below are similar, find the value of x as indicated on the diagram.



STATION D

1. Solve for the unknown as indicated in the triangle below.



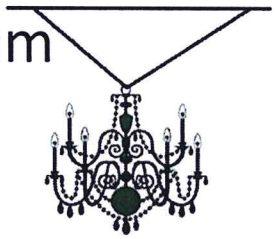
3. In ΔABC, $C = 90°$, $B = 62°$ and c=11 m. Find the length of side a. Include a labeled diagram with your solution.

STATION F

The angle of depression from the top of a tower to the top of a 16 m building is 48°. The tower and building are 30 m apart. How high is the tower? Include a labeled diagram with your solution.

STATION G

A chandelier is suspended from the ceiling by two chains. One chain is 46 cm long and forms an angle of 60° with the ceiling. The other chain is 64 cm long. What angle does the longer chain make with the ceiling? Label the diagram provided as part of your solution.



STATION H

Two tracking stations are on opposite sides of a rocket that has been shot into the air. The tracking stations are 20 km apart. From station A, the angle of elevation of the rocket is 41°; from station B, the angle of elevation of the rocket is 75°. What is the altitude of the rocket? Include a labeled diagram with your solution.