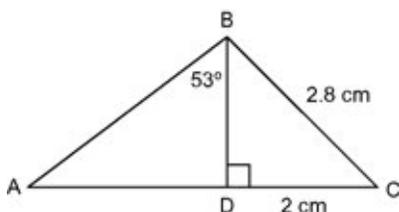
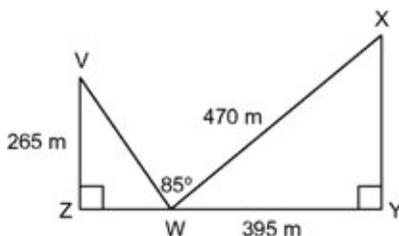


Section 4.3 Solve Problems Involving Two Right Triangles

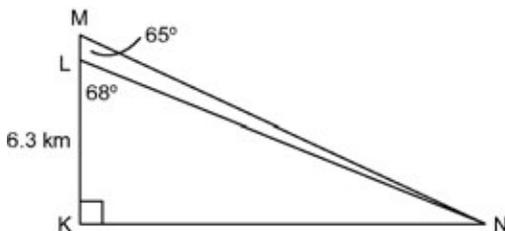
1. Determine the length of side AB. Round your answer to the nearest tenth of a centimetre.



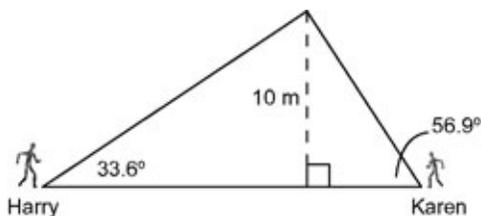
2. Determine the length of side VW. Round your answer to the nearest metre.



3. Determine the length of side MN. Round your answer to the nearest kilometre.



4. The vertical height of a hill is 10 m. The angles of elevation are 33.6° and 56.9° as shown. Karen runs up the steeper side of the hill and Harry runs up the other side.

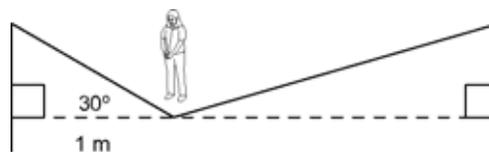


- a) How far, to the nearest tenth of a metre, does Harry have to run to get to the top of the hill?

- b) How far, to the nearest tenth of a metre, does Karen have to run to get to the top of the hill?

- c) What was the horizontal distance between Harry and Karen before they started running?

5. Monika is bouncing on a trampoline. At a point when the trampoline is fully stretched, she is 1 m from the left edge and the angle of inclination from her feet to the top left edge is 30° .



- a) How far has Monika sunk into the trampoline?
- b) The width of the trampoline is 4 m. What is the length of the stretched surface?
- c) What is the angle between the two slanted surfaces of the trampoline, to the nearest degree?

6. Ryan is standing at the top of an observation tower. He points his flashlight toward the horizon then slowly lowers it until he sees a cat. The angle of depression from his flashlight to the cat is 60° . Ryan continues to lower the beam of the flashlight until he sees a dog at an angle of depression of 75° .

- a) If the cat is 26 m from the tower, how high is the tower?
- b) How far does the beam of light travel from Ryan's flashlight to the dog?
- c) What is the horizontal distance between the cat and the dog?