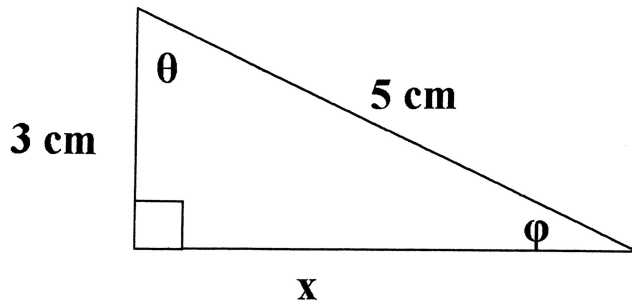
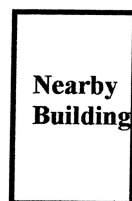


Trigonometry Practice

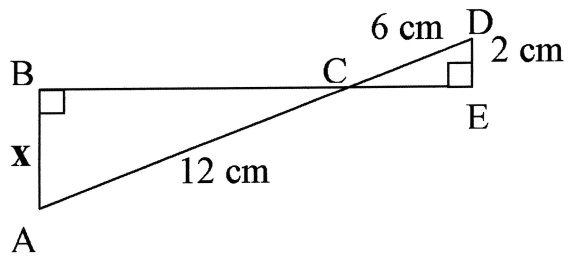
1. Determine all angles and side lengths in the following right triangle:



2. A tourist standing at the top of the CN Tower sees the top of a nearby building at an angle of depression of 10° . The CN Tower is 550 m tall. If the building is known to be 3 km away, how tall is this building?



3. Determine the length of x using two methods.

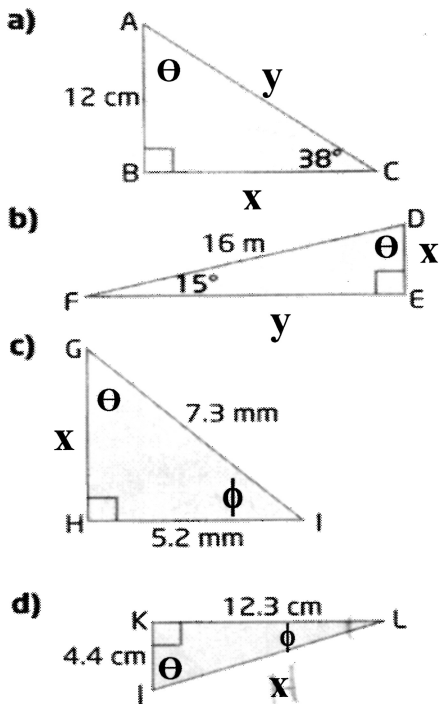


a) Solve for x using similar triangles.

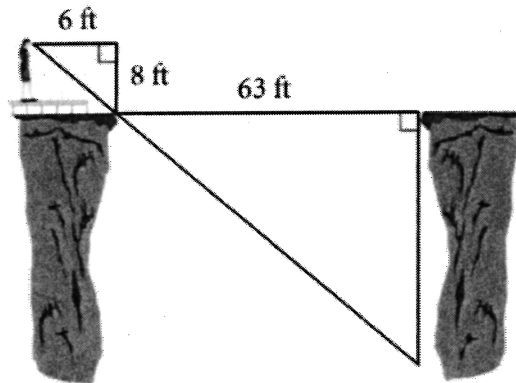
b) Solve for x using trigonometry.

Solving Triangles – Homework

1. Solve each triangle.

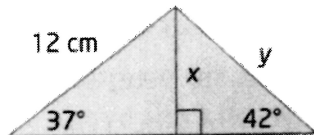


5. The distance across a gorge is 63 ft. Susan stands at the front of the elevated observation deck, 6 ft back from the edge of the gorge. Her eye level is 8 ft from the ground. She can just see the bottom of the cliff on the other side. How deep is the gorge, to the nearest foot?

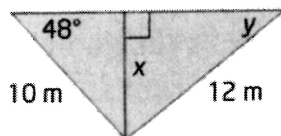


2 Two buildings are 15 m apart. From the top of the shorter building, the angle of elevation to the top of the taller building is 48° , and the angle of depression to the bottom of the taller building is 34° . Find the heights of the two buildings to the nearest tenth of a metre.

3. Find the length of x , then the length of y , to the nearest tenth of a centimetre.



4. Find the length of x , to the nearest tenth of a metre, then the measure of y , to the nearest degree.



Answers

- 1a) $x = 15.4$ cm, $y = 19.5$ cm, $\theta = 52^\circ$
- 1b) $x = 4.1$ m, $y = 15.5$ m, $\theta = 75^\circ$
- 1c) $x = 5.1$ mm, $\theta = 44.6^\circ$, $\phi = 45.4^\circ$
- 1d) $x = 13.1$ mm, $\theta = 70.3^\circ$, $\phi = 19.7^\circ$
- 2. short = 10.1 m, tall = 26.8 m
- 3. $x = 7.2$ cm, $y = 10.8$ cm
- 4. $x = 7.4$ m, $y = 38.3^\circ$
- 5. 84 feet