## Mission: Disaster Relief

A surveyor and his assistant are surveying the topography in a deep vertical cave that opens up to huge cavern.
The surveyor has just suffered a heart attack so the Search \& Rescue Team are called to air lift him out. The surveyor assistant measures the angle to the top of the cave opening to be $61^{\circ}$. He then moved towards the vertical wall opening for a distance of 10 m . From this closer point, the angle to the top is $71^{\circ}$.

- The pilot of the helicopter needs to know the depth of the cave, to the nearest hundredth of a metre, to safely extract him out.

