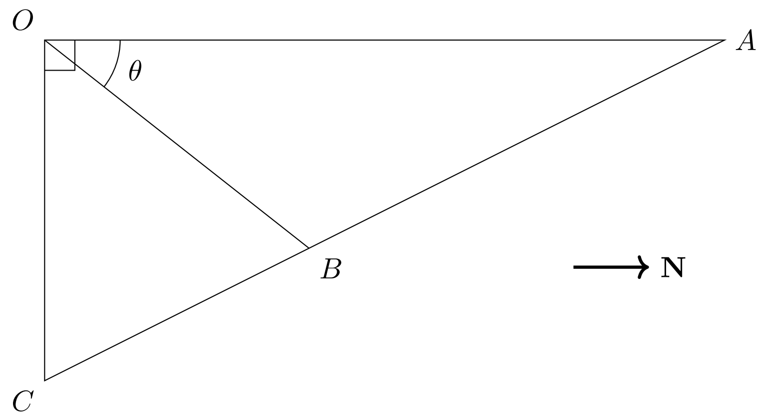


Remark. Draw as many diagrams from as many angles as required. Generally, an isometric diagram and a top-down diagram are the most helpful. It can sometimes also be helpful to draw separate diagrams of each individual triangle in a problem.

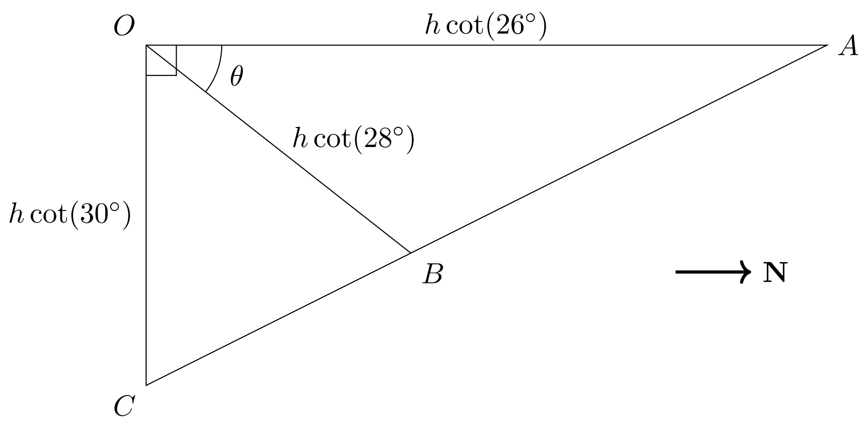
Looking at our second diagram, it is likely that we will need to focus on determining angles in the (non-right-angled) $\triangle AOB$; the sine or cosine rules are likely to be involved in this process. However, in order to do this, we will need useful expressions for at least some of the side lengths – at the very least, AO and BO, and possibly CO as well. Since we have not been given any lengths explicitly we can't really give exact values for these lengths. However, looking back at the first diagram, we can express them in terms of the angle of elevation to the summit and the height h.

Another way to think about this is to note that we really should use all the information in the question, and the easiest way to relate the angles of elevation to the distances of A, B and C from the base O is through the height h.

Examining triangles SOC, SOB and SOA, we have

$$\begin{aligned} \tan(30°) &= \frac{h}{CO} & \tan(28°) &= \frac{h}{BO} & \tan(26°) &= \frac{h}{AO} \\ CO &= h\cot(30°) & BO &= h\cot(28°) & AO &= h\cot(26°). \end{aligned}$$

Let's put this information on the diagram and see what we have.



Remark. It is often helpful to put important information gained during your working out on diagrams. You can append it to diagrams you have already drawn, though if them start to become too cluttered feel free to draw additional diagrams.

The cot ratios have known values (since the angles are known), so it is just h that is unknown in these expressions. In order to evaluate anything, therefore, we need to be able to eliminate any h appearing in the expression. Combinations of the sine and cosine rule in $\triangle AOB$ will always involve