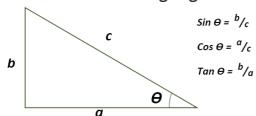
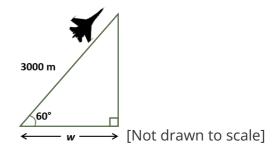
Calculating distance II

This task is about using trigonometry to calculate distances in practical problems.



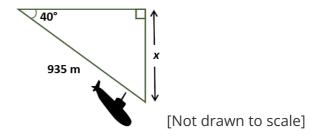
Use the formulae in the box to answer the following questions.

a) A jet plane climbs at an angle of 60° and travels a distance of 3000 metres.



How far has the plane travelled in the horizontal direction, shown by 'w'? metres

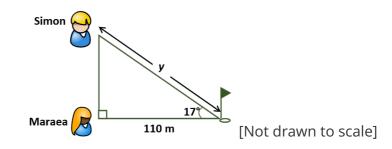
b) A submarine dives at an angle of 40° for 935 metres.



Calculate the depth the submarine will be at after the dive, shown by 'x'.

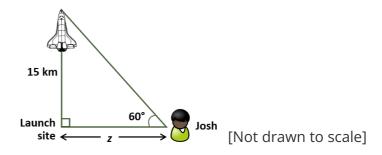
 Simon and Maraea are playing golf.
Maraea is 110 metres away from the hole.

Simon is standing at an angle of 17° from Maraea and the hole.



How far is John from the hole, shown by 'y'? metres

d) Josh watched a space shuttle launch. When the space shuttle was 15 km above the Earth, there was an angle of 60° between where Josh was standing, the space shuttle, and the launch site.



Calculate how far Josh was from the launch site, shown by 'z'.