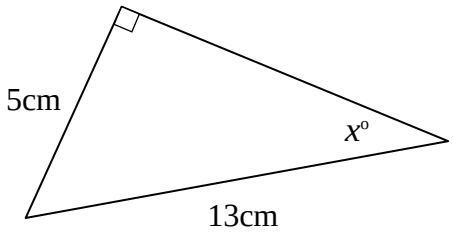
National 4 Relationships Homework - Calculating an angle in a right-angled triangle

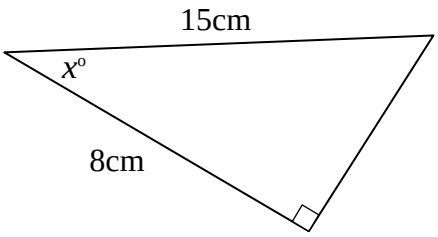
1. Calculate the size of the angle marked x^o in these right-angled triangles.

[3, 3]

(a)

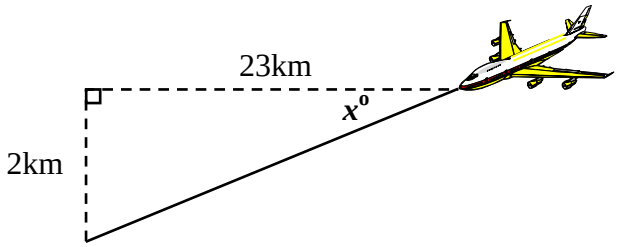


(b)



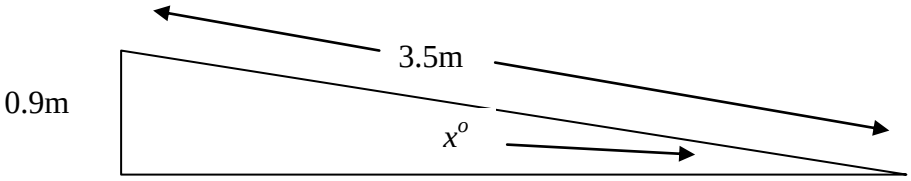
2. An aircraft making a steady descent decreases height by 2km over 23km. What is the angle of descent, $\boldsymbol{x^o}$?

[3]



3. In a woodland walk there is a ramp for prams and wheel chairs over an outcrop of rocks.

The diagram shows the side view of it.



The ramp is 3·5metres long and the supports are 0.9 metres high.

To be safe, the angle that the ramp makes with the ground should be between 12^o and 16^o.

Is the ramp safe?
You must show all working and give a reason for your answer.

[5]

[16 marks]