Stage 1 - General Mathematics Trigonometry Re-Test

Unless otherwise stated, give all answers to 1 decimal place.

1   Find the value of x in each of the following by using Pythagoras.

a   **b**

2   Find the value of x in each of the following by using SOH CAH TOA.

a   **b**

3   For the following triangle,

a   Find the area of the triangle by using the sine rule.

b   Find the value of x by using the cosine rule.

4   For the following triangle,

a   Find the area of the triangle by using Heron's rule.

b   Find the angle at C by using the cosine rule.

5   For each of the following, find the value of x using the sine rule.
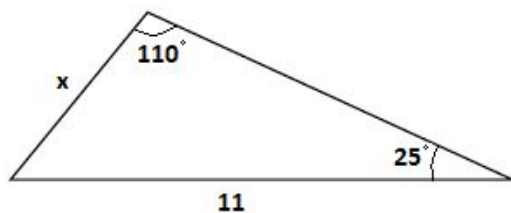
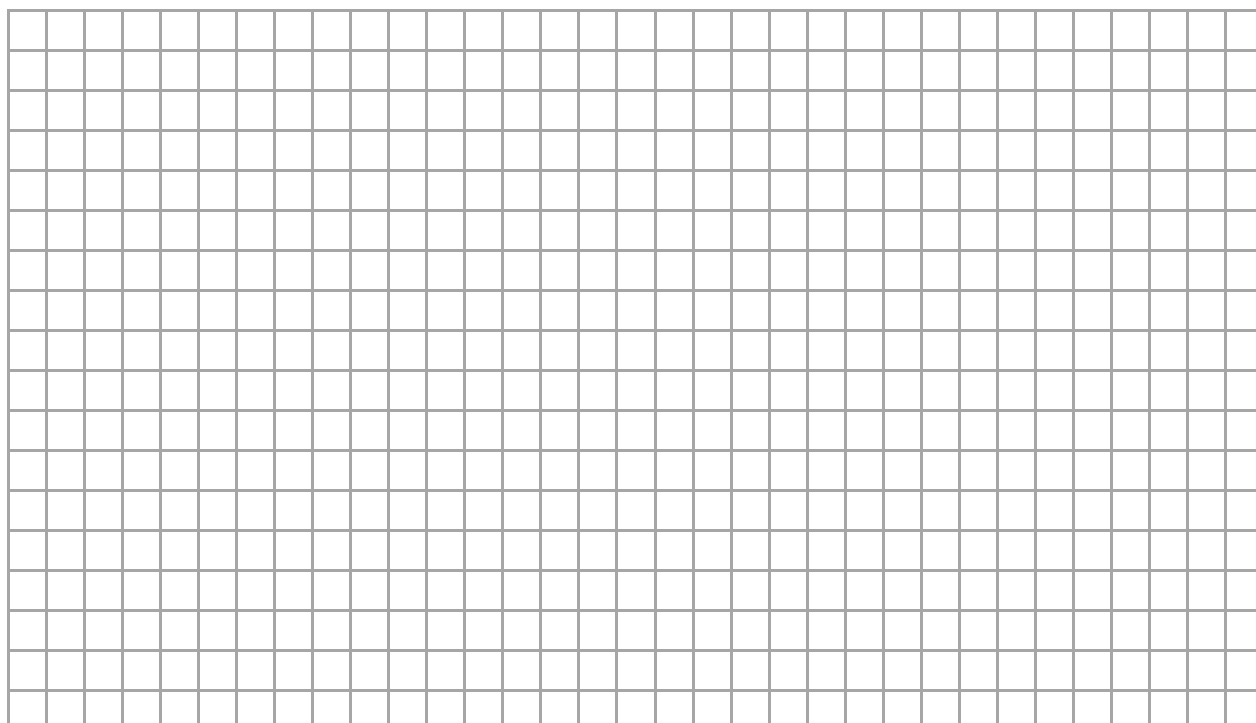**a**   **b**
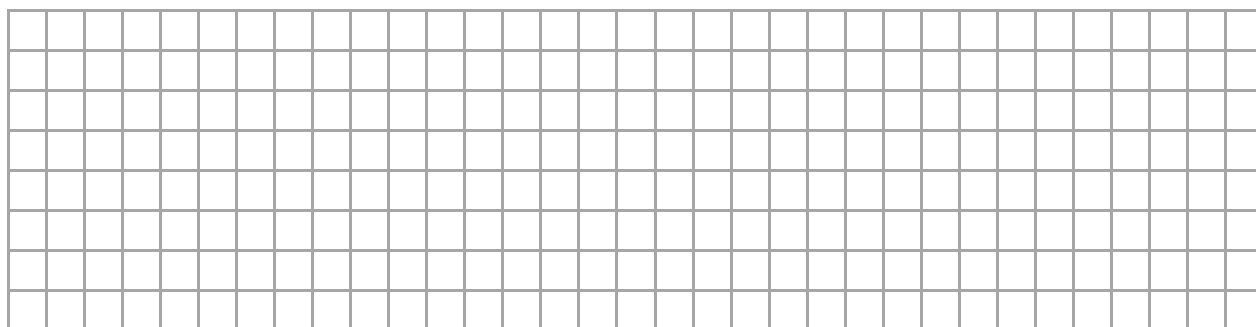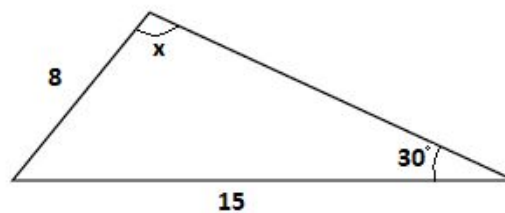
6   A plane takes off from the airport and flies for 17km due south. It then turns to head on a bearing of 210 degrees, and travels for a an additional 40km.
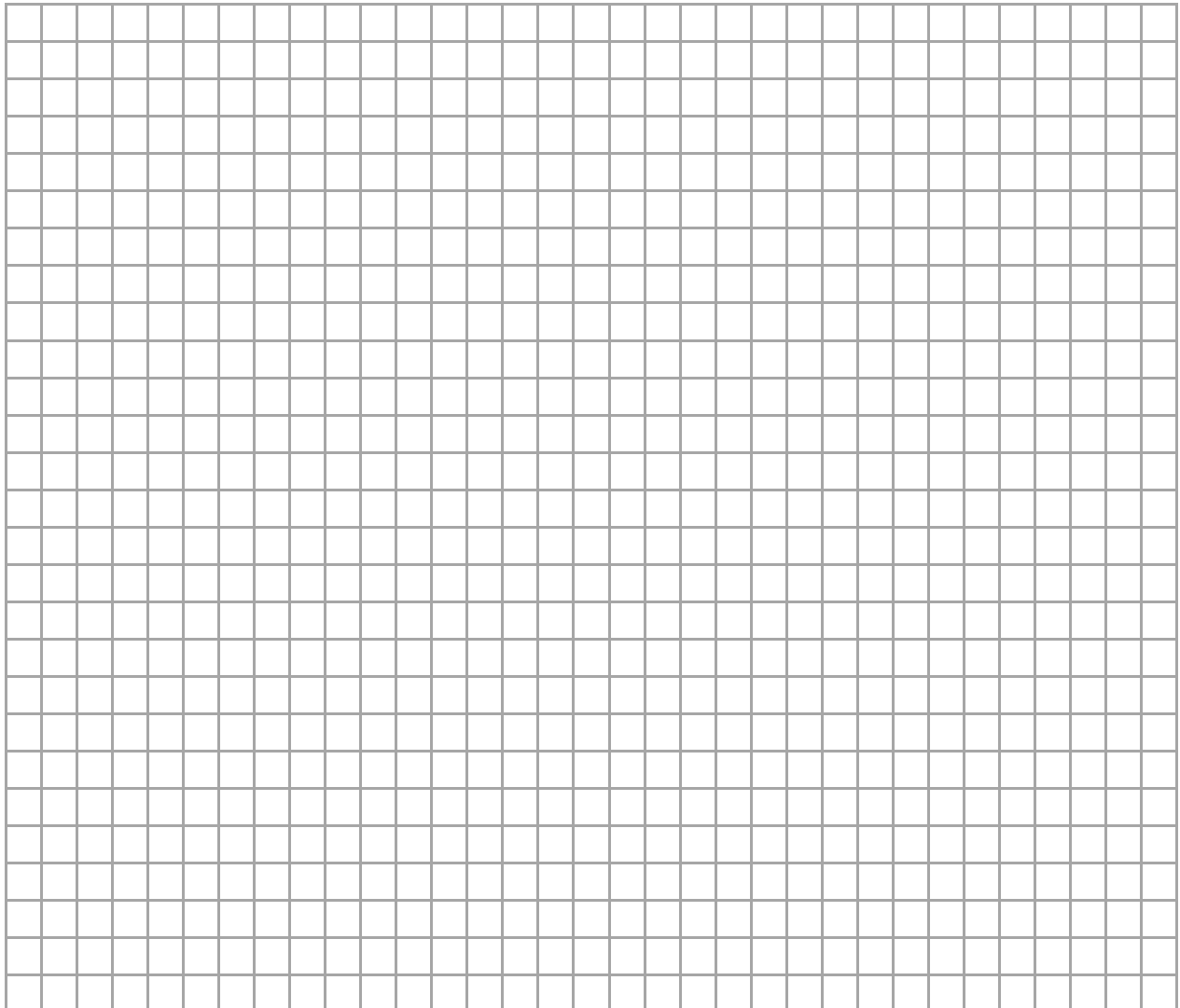
a   How far from the airport is the plane?

b   From the airport, what is the bearing to the plane?

7   From the foot of the Eiffel tower I have to look upwards at an angle of 17° to sight the top of a tree. From the top of the Eiffel tower, which is 300m tall, I have to look down at an angle of 81° below the horizontal to sight the tree top.

    a   How tall is the tree?

    b   How far away from the base of the Eiffel tower is the tree?

    c If I was standing on the platform, only 55.5m of the way up the tower, at what angle would I have to look down below the horizontal to sight the top of the tree?