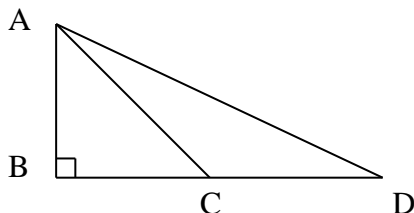# Edexcel AS Mathematics Trigonometry

Section 3: The sine and cosine rules

Exercise level 2

1. A golfer hits a ball B a distance of 170 m on a hole that measures 195 m from tee to hole. If his shot is directed 10° away from the direct line to the hole, find how far his ball is from the hole.

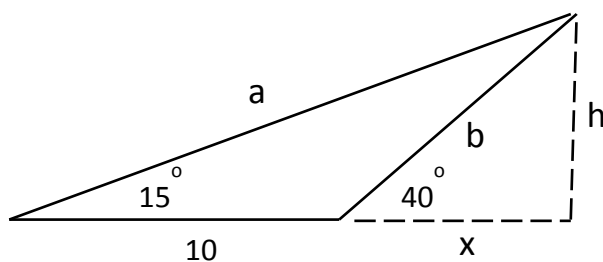2. Calculate AB in the diagram below given that CD is 15 m, angle BCA = 40° and angle BDA = 20°.

3. A tower stands on a slope inclined at 18° to the horizontal. From a point lower down the slope and 150 m from the base of the tower, the angle of elevation of the top of the tower is 27.5°, measured from the horizontal. Find the height of the tower.

4. A barge is moving at a constant speed along a straight canal. The angle of elevation of a bridge is 10°. After 10 minutes the angle of elevation is 15°. After how much longer does the barge reach the bridge? Give your answer to the nearest second.

5. Find all the lettered edges and angles in the figures in the following diagrams:
   (i)

   (ii)

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