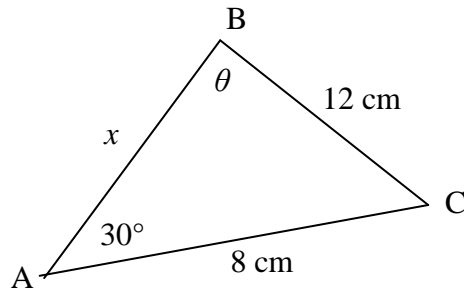## Section 3: Sine and cosine rules
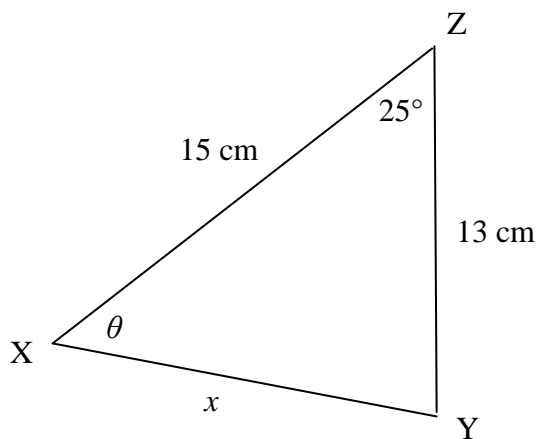
Section test

1.

Find the angle ABC.
Find the length of the side AB.

2.

Find the length of the side XY.
Find the angle θ.

3. Three points A, B and C, which lie on a level plane.
   B is 7 km from A on a bearing of 030°.
   C is 5 km from B on a bearing of 280°.

   Find the distance AC.
   Find the bearing of A from C.
   Find the area of the triangle ABC.

4. Some pirates have buried some treasure on an island. The treasure, X, is buried on a

bearing of 050° from the swamp, S, and on a bearing of 300° from the caves, C. The caves are 680 m from the swamp on a bearing of 085°.

Find the distance CX.

The harbour is 650 m south-west of the caves.
How many metres do the pirates need to walk to find the treasure from the harbour?
What is the bearing of the treasure from the harbour to the nearest degree?