

Section 3: The sine and cosine rules

Exercise level 1

- Solve the triangle ABC in which $A = 66^\circ$, $B = 42^\circ$ and $c = 12$ cm.
- Find two possible values of c in triangle ABC given that $a = 16$ cm, $b = 10$ cm, and $B = 30^\circ$.
- Solve the triangle ABC in which $a = 6$ cm, $b = 9$ cm and $C = 97^\circ$.
- Solve the triangle PQR in which $p = 8$ cm, $q = 9$ cm and $r = 10$ cm.
- In triangle XYZ, $X = 100^\circ$, $Y = 30^\circ$ and $XY = 10$ cm. Calculate the area of the triangle.
- The area of a triangle is 12 cm^2 . Two of the sides are of lengths 6 cm and 7 cm. Calculate possible lengths for the third side.
- A ship S is 6.8 km from a lighthouse on a bearing of 310° . A second ship T is 8.4 km from the lighthouse on a bearing 075° . Calculate ST and the bearing of T from S correct to the nearest degree.
- Find all the lettered edges and angles in the figures in the following diagrams:

