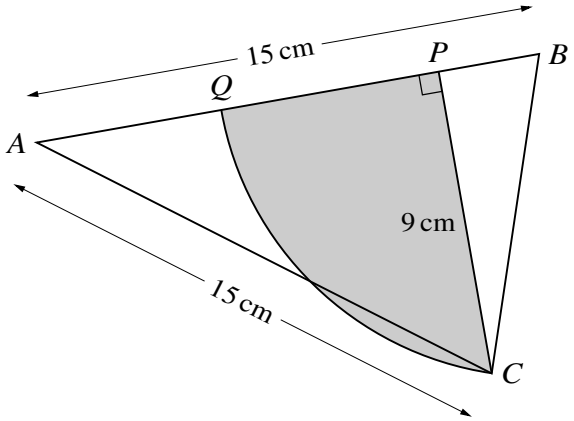
7



In the diagram the lengths of AB and AC are both 15 cm. The point P is the foot of the perpendicular from C to AB. The length CP = 9 cm. An arc of a circle with centre B passes through C and meets AB at Q.

(a) Show that angle ABC = 1.25 radians, correct to 3 significant figures. [2]

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(b) Calculate the area of the shaded region which is bounded by the arc CQ and the lines CP and PQ. [4]