## Trigonometry (Q 5, Paper 2)

2008
5 (a) A circle has centre $o$ and radius 21 cm . $s$ and $t$ are two points on the circle and $|\angle s o t|=120^{\circ}$.

Find the length of the shorter arc st, correct to the nearest centimetre.

(b) In the right-angled triangle $p s q, p$ is joined to a point $r$ on [sq] . $|p q|=8 \mathrm{~cm},|\angle p r q|=48.8^{\circ}$ and $|\angle p s q|=36^{\circ}$.
(i) Find $|p r|$, correct to one decimal place.
(ii) Find $|s r|$, correct to the nearest centimetre.

(c) The area of the triangle $a b c$ is $33 \mathrm{~cm}^{2}$.
$|a b|=8 \mathrm{~cm}$ and $|\angle c a b|=55^{\circ}$.
(i) Find $|b c|$, correct to one decimal place.
(ii) Find $|\angle a b c|$, correct to the nearest degree.


## Answers

5 (a) 44 cm
(b) (i) 10.6 cm
(ii) 4 cm
(c) (i) 8.5 cm
(ii) $76^{\circ}$

