TRIGONOMETRY (Q 5, PAPER 2)

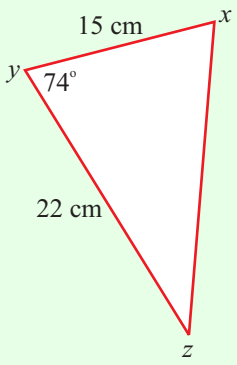
1996

5 (a) Find the length of an arc of a circle of radius length 6 cm subtending an angle of 120^o at the centre. Give your answer in terms of π.

(b) A and B are acute angles where $\sin A = \frac{3}{5}$ and $\cos B = \frac{5}{13}$.
Find, as fractions, the value of $\cos A$ and the value of $\sin B$.
Find the value of $\sin(A + B)$, giving your answer as a single fraction.

(c) xyz is a triangle where $|xy| = 15$ cm,
$|yz| = 22$ cm and $|\angle xyz| = 74^o$.
Find
(i) $|xz|$, correct to the nearest cm

(ii) $|\angle yxz|$, correct to the nearest degree.



ANSWERS

5 (a) 4π

(b) $\frac{4}{5}, \frac{12}{13}, \frac{63}{65}$

(c) (i) 23 cm (ii) 67^o