



# Fill In The Blanks...



## Finding Lengths Using the Cosine Rule

Labelled diagram	Substitute into formula	$x^2$	$x$ to 1dp
	$x^2 = 7^2 + 5^2$ $-2 \times 7 \times 5 \times \cos 76$	$x^2 = 57.065..$	$x = 7.6 \text{ cm}$
	$x^2 = 11^2 + 8^2$ $-2 \times 11 \times 8 \times \cos 96$	$x^2 = 203.397..$	$x = 14.3 \text{ mm}$
	$x^2 = 17^2 + 10^2$ $-2 \times 17 \times 10 \times \cos 47$	$x^2 = 157.120..$	$x = 12.5 \text{ cm}$
	$x^2 = 1.6^2 + 0.9^2$ $-2 \times 1.6 \times 0.9 \times \cos 70$	$x^2 = 2.384..$	$x = 1.5 \text{ m}$
	$x^2 = 5^2 + 12^2$ $-2 \times 5 \times 12 \times \cos 90$	$x^2 = 169$	$x = 13 \text{ cm}$
	$x^2 = 16^2 + 12^2$ $-2 \times 16 \times 12 \times \cos 60$	$x^2 = 208$	$x = 14.4 \text{ mm}$
	$x^2 = 32^2 + 14^2$ $-2 \times 32 \times 14 \times \cos 53$	$x^2 = 680.77..$	$x = 26.1$ <i>(cm/mm/m)</i>