
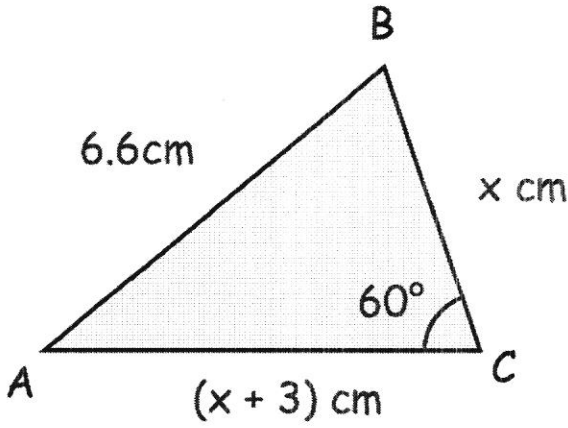


19th June	
Rearrange $d = \sqrt{abc - 3}$ to make a the subject	<div style="text-align: right;">Corbettmaths </div> $d^2 = abc - 3$ $abc = d^2 + 3$ $a = \frac{d^2 + 3}{bc}$
 <p>Calculate the area of ABC. Give your answer to 1 decimal place.</p>	$6.6^2 = x^2 + (x+3)^2 - 2x(x+3)\cos 60^\circ$ $43.56 = 2x^2 + 6x + 9 - x^2 - 3x$ $0 = x^2 + 3x - 34.56$ $x = \frac{-3 \pm \sqrt{147.24}}{2}$ $x = 4.57, -7.57 \text{ (rejected)}$ $\text{Area} = \frac{1}{2}x(x+3)\sin 60^\circ$ $= \underline{15.0 \text{ cm}^2 \text{ (1 d.p.)}}$
Angle θ is reflex and $\cos\theta = \frac{40}{41}$ $\sin\theta < 0$ Work out the value of $\sin\theta$	$\cos^2\theta + \sin^2\theta = 1$ $\frac{1600}{1681} + \sin^2\theta = 1$ $\sin^2\theta = \frac{81}{1681}$ $\sin\theta = \underline{\underline{\frac{-9}{41}}}$
Use Pascal's triangle to expand $(1 + 2w)^6$	$1 \quad 6 \quad 15 \quad 20 \quad 15 \quad 6 \quad 1$ $1 \quad 2w \quad 4w^2 \quad 8w^3 \quad 16w^4 \quad 32w^5 \quad 64w^6$ $1 + 12w + 60w^2 + 160w^3$ $+ 240w^4 + 192w^5 + 64w^6$