


7th October	
<p>A circle has centre <math>(-4, 8)</math> and radius 5.</p> <p>Write down the equation of the circle</p>	<div style="text-align: right;">             Corbettmaths         </div> $\underline{(x+4)^2 + (y-8)^2 = 25}$
<p><math>4a(2x+5) + 3(ax+1) \equiv b - 55x</math></p> <p>Work out a and b</p>	$8ax + 20a + 3ax + 3 = b - 55x$ $11ax + (20a + 3) = b - 55x$ $11a = -55 \Rightarrow \underline{a = -5}$ $20a + 3 = b \Rightarrow \underline{b = -97}$
<p>Solve the equation</p> $\frac{3}{2x-1} = 1 + \frac{4}{3x-1}$	$3(3x-1) = (2x-1)(3x-1) + 4(2x-1)$ $9x - 3 = 6x^2 - 5x + 1 + 8x - 4$ $0 = 6x^2 - 6x$ $0 = 6x(x-1)$ $\underline{x = 0, 1}$
<p>Solve</p> $2\cos^2 x + 2 = 7\sin x$ <p>for <math>0^\circ &lt; x &lt; 360^\circ</math></p>	$2(1 - \sin^2 x) + 2 = 7\sin x$ $4 - 2\sin^2 x = 7\sin x$ $2\sin^2 x + 7\sin x - 4 = 0$ $(2\sin x - 1)(\sin x + 4) = 0$ $\sin x = \frac{1}{2} \text{ or } -4 \text{ (rejected)}$ $\underline{x = 30^\circ, 150^\circ}$