


16th April	
Make x the subject of $y = \sqrt{\frac{x+9}{x+1}}$ $y^2 = \frac{x+9}{x+1}$ $xy^2 + y^2 = x+9$	 Corbettmaths $xy^2 - x = 9 - y^2$ $x(y^2 - 1) = 9 - y^2$ $x = \frac{9 - y^2}{y^2 - 1}$
The lengths of the three sides of a triangle are 7.2cm, 7.4cm and 10.4cm Find the largest angle in the triangle.	$10.4^2 = 7.2^2 + 7.4^2 - 2 \times 7.2 \times 7.4 \cos A$ $108.16 = 106.6 - 106.56 \cos A$ $106.56 \cos A = -1.56$ $\cos A = -\frac{13}{888}$ $A = 90.84^\circ$
$y = \frac{12x^2 - 2x^7}{3x}$ $y = 4x - \frac{2}{3}x^6$ Work out the value of x when $\frac{dy}{dx} = -968$	$\frac{dy}{dx} = 4 - 4x^5$ $4 - 4x^5 = -968$ $972 = 4x^5$ $x^5 = 243 \quad x = 3$
A group of 7 people enter a room. Each person shakes hands with all the other people in the room. How many handshakes are there in total?	$6 + 5 + 4 + 3 + 2 + 1$ 21
$4\sin^2 x + 15\cos^2 x \equiv A + B\sin^2 x$ Work out the values of A and B. $4\sin^2 x + 15(1 - \sin^2 x)$ $4\sin^2 x + 15 - 15\sin^2 x$ $15 - 11\sin^2 x$	$A = 15$ $B = -11$