


5th June	
Simplify this ratio fully  $\sqrt{45} : \sqrt{180} : \sqrt{320}$	<div style="text-align: right;">Corbettmaths </div> $3\sqrt{5} : 6\sqrt{5} : 8\sqrt{5}$ $= \underline{3 : 6 : 8}$
Describe fully the <b>single</b> transformation represented by $\begin{pmatrix} 2 & 0 \\ 0 & 2 \end{pmatrix}$	Enlargement s.f. 2 centre (0,0).
$y = x^4 - \frac{4}{x}$  Work out the value of $\frac{d^2y}{dx^2}$ when $x = -1$	$y = x^4 - 4x^{-1}$ $\frac{dy}{dx} = 4x^3 + 4x^{-2}$ $\frac{d^2y}{dx^2} = 12x^2 - 8x^{-3}$ $x = -1 \Rightarrow \underline{\frac{d^2y}{dx^2} = 20}$
Work out the equation of the normal to the curve $y = (2x + 1)(x + 7)$ at the point where $x = -5$	$y = 2x^2 + 15x + 7$ $\frac{dy}{dx} = 4x + 15$ $x = -5 \Rightarrow \frac{dy}{dx} = -5, y = -18$  Normal is $y + 18 = \frac{1}{5}(x + 5)$ $\underline{y = \frac{1}{5}x - 17}$