

Name: _____

<p>1. (a) Express $4x^2 - 8x + 7$ in the form $a(x+b)^2 + c$, where a, b and c are constants.</p> <p>(b) Hence, or otherwise, write down the coordinates of the turning point on the curve $y = 4x^2 - 8x + 7$. Is it a maximum or minimum?</p>	
<p>2. Sketch the curve with equation $y = (x+2)^2(x-1)$. Show clearly the coordinates of any points where the curve crosses or meets the coordinate axes.</p>	
<p>3. Differentiate $\frac{\sqrt{x} - 2x}{x^2}$ with respect to x</p>	
<p>4. The circle C has the equation $x^2 + y^2 + 6x = 5 - 7y$</p> <p>(a) Find the coordinates of the centre of C and find the radius of C.</p> <p>(b) Does the origin $(0, 0)$ lie inside or outside the circle?</p>	