

Secondary Puzzle Page

Same Surface, Different Depth Problems

These linked problems are taken from Craig Barton's excellent website:

<https://ssddproblems.com/the-cubic-equation/>

<p>Show that the equation $x^3 - 7x + 5 = 0$ has a solution between $x = 2$ and $x = 3$</p>	<p>$f(x) = x^3 - 7x + 5$ $g(x) = x - 1$</p> <p>Find $fg(x)$</p>
<p>Let $x_{n+1} = x_n^3 - 7x_n + 5$ Given that $x_0 = 2$, find x_3 to 3 significant figures</p>	<p>Find the remainder when $x^3 - 7x + 5$ is divided by $(x - 5)$ <i>[Further Maths GCSE]</i></p>