

Advanced Higher Maths
SQA 2022 Paper 2
Question 11

A curve defined parametrically has the following properties:

- $x = \tan^{-1} 2t$
- $\frac{dy}{dx} = 6t(1 + 4t^2)$
- $y = 5$ when $t = 1$.

Find y in terms of t .

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Answer:

$$y = 6t^2 - 1$$