

**Exercise 1**

Calc. : ✓

The function  $y = 2x^3 - 5x^2 - 4x + 2$  is defined for  $x \in \mathbb{R}$ .

1. Use differentiation to determine the $(x, y)$ coordinate for any stationary points of the function $y$ .	2 marks
2. Classify the nature of any stationary points in terms of local maxima or minima.	3 marks
3. Find the range of $x$ values for which the curve is increasing.	2 marks
4. Find the equation of the tangent line at $x = 1$ .	3 marks