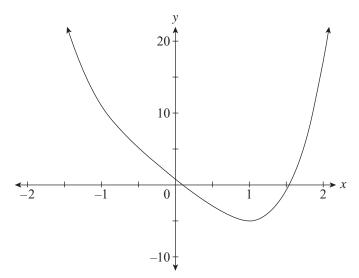
Question 2 (8 marks)

Consider the function $f(x) = 2x^4 - 8x + 1$. The graph of the function y = f(x) is shown in Figure 1.





(a) (i) Find f'(x).

(1 mark)

(ii) Hence, using an algebraic process, determine the *x*-coordinate and the *y*-coordinate of the stationary point of the graph of y = f(x).



(3 marks)

(b) (i) Find f''(x).

(1 mark)

(ii) Determine whether the graph of y = f(x) has any points of inflection. Justify your answer using mathematical reasoning.

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(3 marks)