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5.7 Further graph properties

Checklist

What you should know

By the end of this subtopic you should be able to:

- find the second derivative of a function and apply it in context

- understand the different forms of notation used for the second derivative

- use a calculator to graph the first and second derivative without algebraically finding these derivatives

- understand the relationship between the sign of the derivative and the increasing/decreasing behaviour of the graph of a function.

- understand the relationship between the sign of the second derivative and the concavity of the graph of a function

- identify stationary points and be aware of the different types

- identify points of inflexion

- understand the relationship between the x-intercepts and the turning points on the graph of the derivative function and the features of the original function

- draw sketches based on information about the first and second derivative of a function.

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