Sketching Gradient Functions

Example

Sketch the gradient function for the function $f\left(x\right)=x^{2}+3x+2$

Sometimes **you won’t be given the function explicitly**, you will only be given **the sketch**.

Example



Example 2





Test Your Understanding



Summary



Extension

[MAT 2015 1B]

$$f\left(x\right)=\left(x+a\right)^{n}$$

where $a$ is a real number and $n$ is a positive whole number, and $n\geq 2$. If $y=f(x)$ and $y=f'(x)$ are plotted on the same axes, the number of intersections between $f(x)$ and $f^{'}\left(x\right)$ will:

1. always be odd
2. always be even
3. depend on $a$ but not $n$
4. depend on $n$ but not $a$
5. depend on both $a$ and $n$.

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