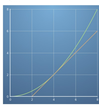
Congratulations! You passed!

Next Item

1. In this quiz you will practice estimating the derivative of a function by choosing the most suitable graphs.

LAST ATTEMPT

Estimate the gradient of the tangent to the function at the point (4, 2) based on the image below.



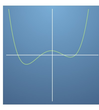
- The gradient is -1.
- The gradient is 0.
- The gradient is 1.

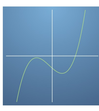
Correct
Change in y divided by the change in x gives the gradient of a straight line (the tangent).

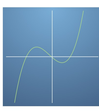
- The gradient is 2.

2. Which diagram best describes the differential of the function in the following graph?

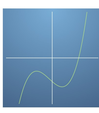
LAST ATTEMPT





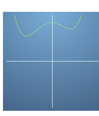


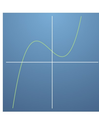
Correct
This figure best describes how the function changes with x.



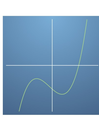
3. Which diagram best describes the differential of the function in the following diagram?

LAST ATTEMPT



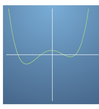


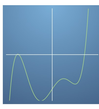
Correct
Shifting a function up or down does not change the gradient at all.



4. Which diagram(s) has a differential **described by** the following image? Choose all correct answers.

LAST ATTEMPT





Correct
Well done! If one function is a vertical shift of another function, then they have the same differential.

Un-selected is correct

Un-selected is correct

Correct
Well done! If one function is a vertical shift of another function, then they have the same differential.

5. What is the derivative at 0 for the function in the graph below?

LAST ATTEMPT

- The derivative is -1.
- The derivative is 0.
- The derivative is 1.
- No derivative exists.

Correct
Derivatives are not well defined at points that don't look "smooth".