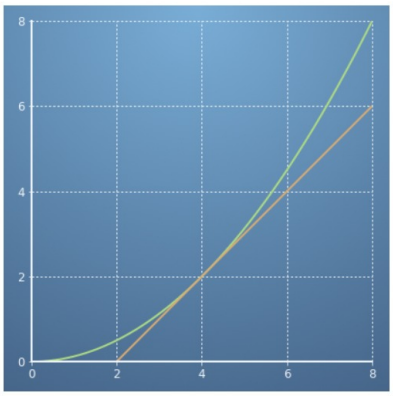
Congratulations! You passed!

Next Item

1 / 1 point

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

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



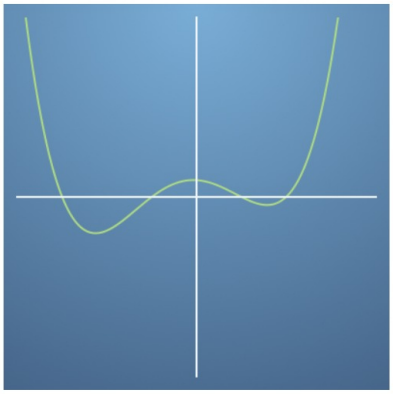
- The gradient is -1.
- The gradient is 0.
- The gradient is 1.

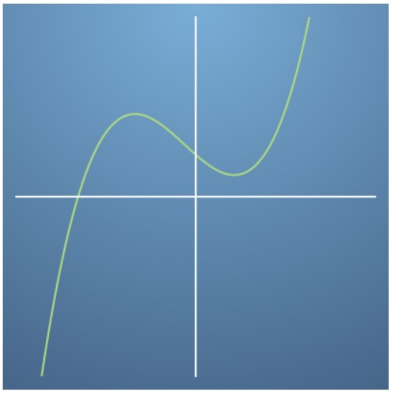
Correct
Change in y divided by the change in x gives the gradient of a straight line (the tangent).

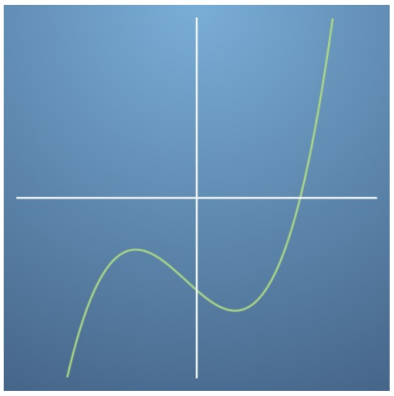
- The gradient is 2.

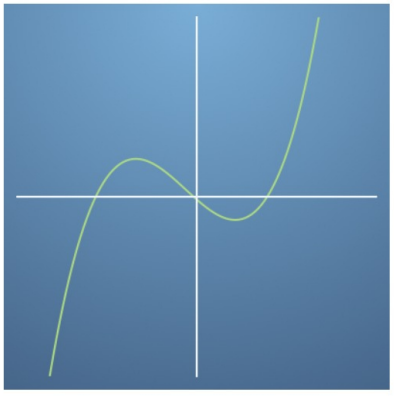
1 / 1 point

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

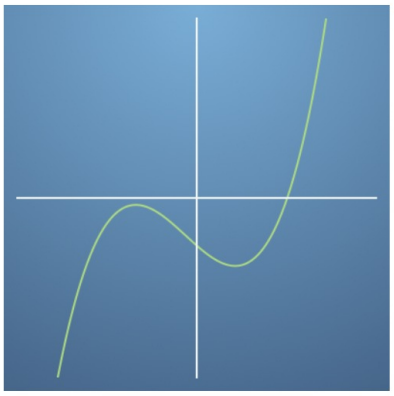






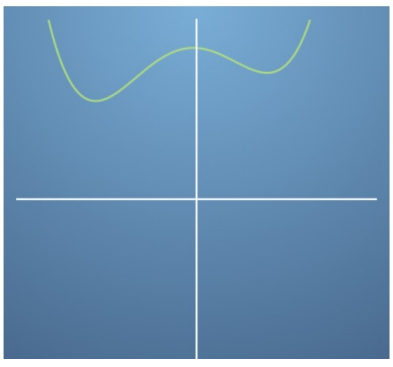


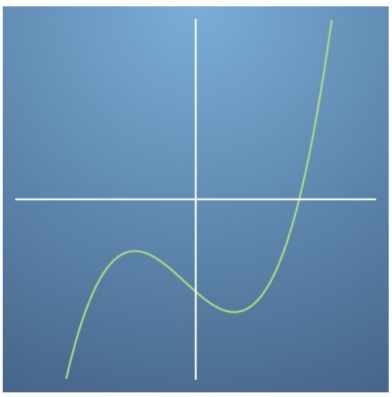
Correct
This figure best describes how the function changes with x.

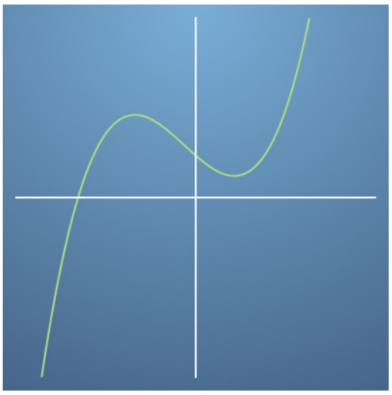


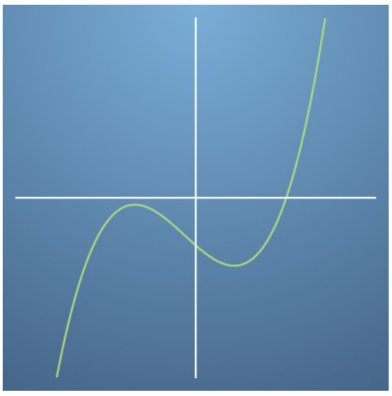
✔ 1 / 1 point

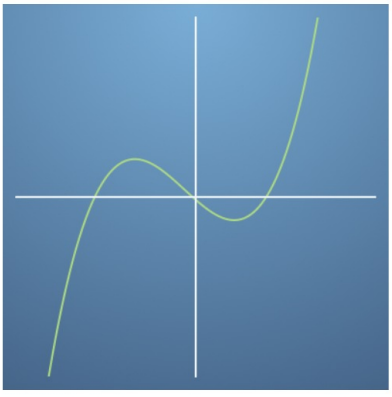
3. Which diagram best describes the differential of the function in the following diagram?









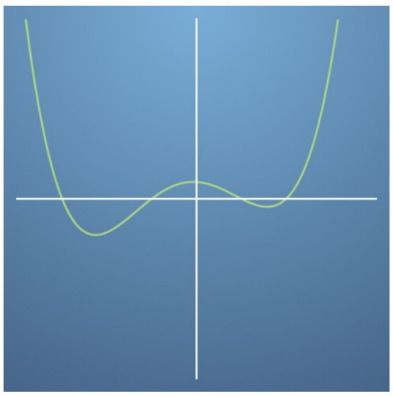


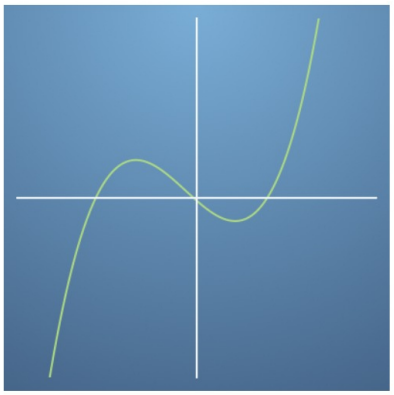
Correct
Shifting a function up or down does not change the gradient at all.

✖

0 / 1 point

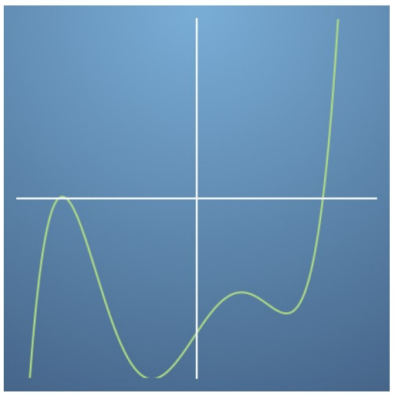
4. Which diagram(s) has a differential **described by** the following image? Choose all correct answers.



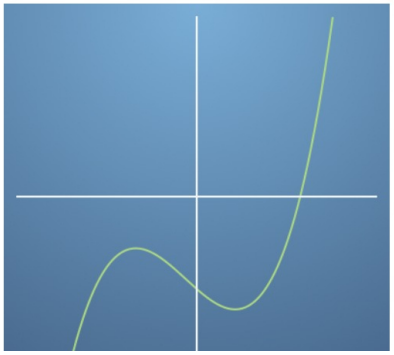


This should not be selected

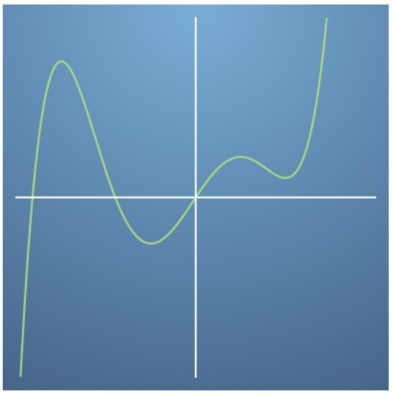
Read the question carefully! The question asks which function will differentiate **into** the function given in the question.



This should be selected



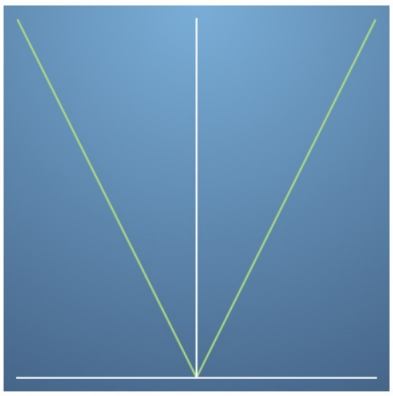
Un-selected is correct



This should be selected

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

1 / 1 point



- 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".