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# Calculus Videos

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## Part I

# Rate of change at a point

## Rate of change at a point

### *Introduction*

On the next pages, you will watch videos and use interactives, and will then answer some questions about the video.

On the bottom of each screen you will see next and back buttons. Continue until the pages say stop, after the google form.

## Rate of change at a point

*Video: Approximating Instantaneous Rates of Change*

YouTube link: <https://www.youtube.com/watch?v=M2Cpa3FxfUU>

## Rate of change at a point

*Interactive: Approximating Instantaneous Rates of Change*

The embedded image on this page is currently broken and being fixed. In the meantime, please go to <https://geogebra.org/m/afsEHCg4>.

Geogebra link: <https://geogebra.org/m/afsEHCg4>

## Rate of change at a point

*Video: Over- and Under-estimates*

YouTube link: <https://www.youtube.com/watch?v=1w9MxqF6JJc>

# Derivatives

## *Questions*

Google Form link: [https://docs.google.com/forms/d/e/1FAIpQLSfZUo0j1KZELVxCw75TgQg\\_XcUsl81gvjseGsELIpsf98mGSw](https://docs.google.com/forms/d/e/1FAIpQLSfZUo0j1KZELVxCw75TgQg_XcUsl81gvjseGsELIpsf98mGSw)

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Learning outcomes:



# Derivatives

*Stop*

This is the end of the Rate of change at a point section.

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Learning outcomes:

## Part II

# Curve Sketching

## Curve Sketching

### *Introduction*

On the next page, you will watch a video on graphing derivative functions and will then answer some questions about the video.

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Learning outcomes:

# Curve Sketching

*Video*

YouTube link: <https://www.youtube.com/watch?v=XbiKMDjFc8w>

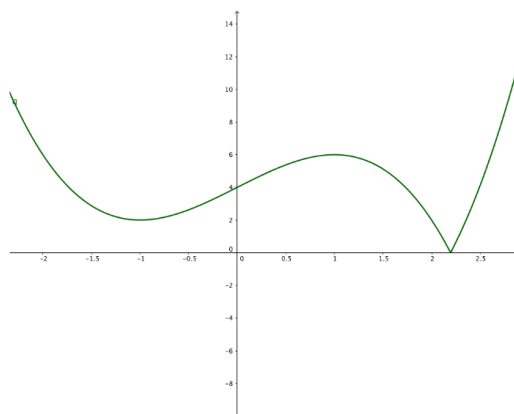
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Learning outcomes:

# Curve Sketching

## Question

Try it out! What will the derivative of this function look like?



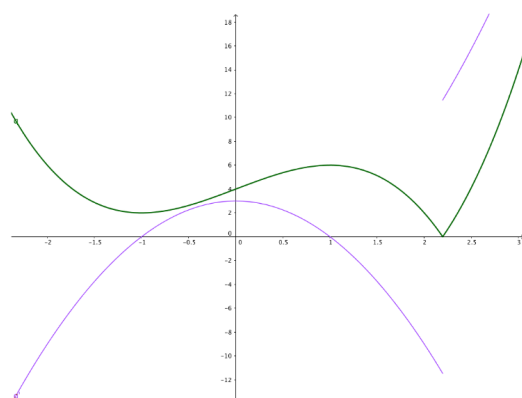
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Learning outcomes:

# Curve Sketching

*Answer*

Should be something similar to:



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Learning outcomes:

# Curve Sketching

## *Questions*

Google Form link: <https://docs.google.com/forms/d/e/1FAIpQLSeJYFkuGEg8V7zBGTA-em0hijN-eX0b8U2->

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Learning outcomes:

# Curve Sketching

*Stop*

This is the end of the curve sketching section.

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Learning outcomes:

## Part III

# The Power Rule

## The Power Rule

### *Introduction*

On the next pages, you will watch a video about the power rule and will then answer some questions about the video.

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Learning outcomes:



# The Power Rule

*Video: The Power Rule*

YouTube link: <https://www.youtube.com/watch?v=kTxhvyG0wG0>

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Learning outcomes:

## Using Basic Derivative Rules

### *Questions*

Google Form link: <https://docs.google.com/forms/d/e/1FAIpQLScReDMv7yMqgBjb70KR79339J1qbxIkjw0hEF9NDCZQupGBQ>

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Learning outcomes:

## Using Basic Derivative Rules

*Stop*

This is the end of the power rule section.

## Part IV

# More Derivative Rules

## More Derivative Rules

### *Introduction*

On the next pages, you will watch a video about additional derivative rules and will then answer some questions about the video.

## More Derivative Rules

*Video*

YouTube link: <https://www.youtube.com/watch?v=VCa0gbCFufk>

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Learning outcomes:

## More Derivative Rules

*Questions*

Google Form link: <https://docs.google.com/forms/d/e/1FAIpQLSf3-M4AtUp2HwkTi1evzov2XvVb6F0qoqvm>

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Learning outcomes:

## More Derivative Rules

*Stop*

This is the end of the more derivatives rules section.

## Part V

# The Chain Rule

## The Chain Rule

### *Introduction*

On the next page, you will watch a video on the chain rule and will then answer some questions about the video.



# The Chain Rule

*Video*

YouTube link: <https://www.youtube.com/watch?v=-khOG1MMZZ4>

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Learning outcomes:

# The Chain Rule

## *Questions*

Google Form link: <https://docs.google.com/forms/d/e/1FAIpQLScgKQF5WIVVCMxqo6ImvjJ8TKOD6aJ6qRDD>

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Learning outcomes:

## The Chain Rule

*Stop*

This is the end of the chain rule section.

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Learning outcomes:

## Part VI

# Optimization

## Optimization

### *Introduction*

On the next page, you will watch a video about the shapes of graphs, derivatives, and optimization and will then answer some questions about the video.

# Optimization

*Video*

YouTube link: <https://www.youtube.com/watch?v=UJCLC9HhzyA>

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Learning outcomes:

# Optimization

## *Questions*

Google Form link: [https://docs.google.com/forms/d/e/1FAIpQLSdfHrK1EG6GnItN8\\_EsUyaazPkiPPilwUcsftHnYcjBju4QTQ](https://docs.google.com/forms/d/e/1FAIpQLSdfHrK1EG6GnItN8_EsUyaazPkiPPilwUcsftHnYcjBju4QTQ)

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Learning outcomes:

# Optimization

*Stop*

This is the end of the optimization section.

## Part VII

# Riemann Sums

## Riemann Sums

### *Introduction*

On the next page, you will watch a video about Riemann Sums and will then answer some questions about the video.



# Riemann Sums

*Video*

YouTube link: <https://www.youtube.com/watch?v=e9s8rsPpIrA>

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Learning outcomes:

# Riemann Sums

## *Questions*

Google Form link: <https://docs.google.com/forms/d/e/1FAIpQLSfZmQNCsQTA-ouLH2y70BMkiaslbhwaJBF2>

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Learning outcomes:

# Riemann Sums

*Stop*

This is the end of the Riemann Sums section.

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Learning outcomes: