

MATHS

# Reading Around The Subject

*The Simpsons and Their Mathematical Secrets by Simon Singh*



*Independent Learning Project*



# Introduction

*"The universe cannot be read until we have learnt the language and become familiar with the characters in which it is written. It is written in mathematical language, and the letters are triangles, circles and other geometrical figures, without which means it is humanly impossible to comprehend a single word"*

When the Italian astronomer and physicist Galileo Galilei published those words in 1623, his work was thought to be one of the first to suggest that the world around us could be understood using mathematical principles rather than philosophical thought. It was common, as it had been in previous civilisations, for mathematics to be something that was read yet now, when students are introduced to algebra or given their first worded question, they marvel at the use of words in a mathematics lesson.

This independent learning project will provide you with the opportunity to discover the joy of reading about mathematics through the book *The Simpsons and Their Mathematical Secrets* by Simon Singh. You are invited to critically read each chapter, discovering a variety of mathematical concepts within a beloved animated sitcom.

I hope the book brings you as much joy as it brought me

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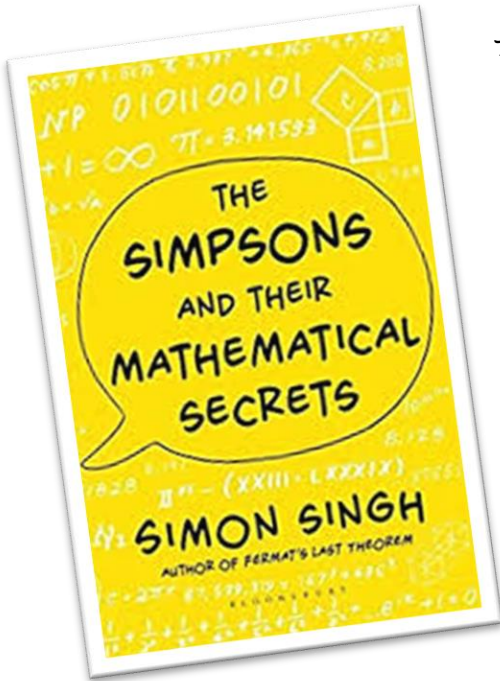


# Chapter Tracker



Chapter	Completed [tick once read]	Further Comments [ideas, questions, opinions]
1: Bart The Genius		
2: Are you $\pi$ -curious?		
3: Homer's Last Theorem		
4: The Puzzle of Mathematical Humor		
5: Six Degrees of Separation		
6: Lisa Simpson, Queen of Stats and Bats		
7: Galgebra and Galgorithms		
8: A Prime-time Show		
9: To Infinity and Beyond		
10: The Scarecrow Theorem		
11: Freeze-Frame Mathematics		
12: Another Slice of $\pi$		
13: Homer <sup>3</sup>		

# The Author



Find out more here: <https://bit.ly/3a5y4ao>

Who is the author (name, date of birth, hometown)?

What is his academic background?

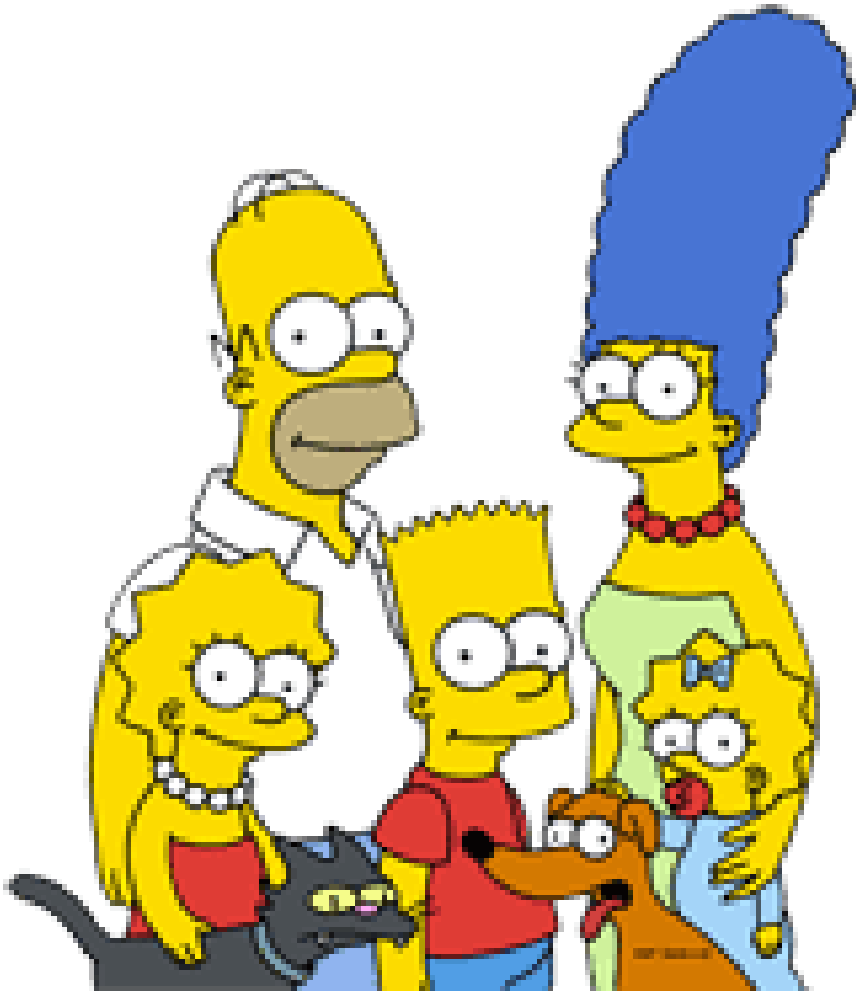
What are three interesting facts about him?



# The Book



What maths do you think has been featured in The Simpsons? Create a mind-map below to show your ideas





# Chapter 1



## Chapter Summary

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## Favourite Points

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What is the first example of an overt mathematical joke in The Simpsons?



## Word Bank

Blank area for writing words from the text.



What question would you ask the author?





# Submission

Please submit your chapter summary  
to your teacher

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# Chapter 2



## Chapter Summary

## Favourite Points



Which three mathematicians are discussed due to their contribution to measuring  $\pi$ ? Give the year and limits provided.



## Word Bank



What question would you ask the author?







# Chapter 3



## Chapter Summary

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## Favourite Points

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What is Fermat's last theorem and when was it proposed? Why is it famous?



## Word Bank

Blank area for writing words from the text.



What question would you ask the author?





# Chapter 4



## Chapter Summary

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## Favourite Points

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Explain how to solve the medieval river-crossing problem "how does the fool cross the river with his burdens three"



## Word Bank

Blank area for writing words from the text.



What question would you ask the author?





# Submission

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# Chapter 5



## Chapter Summary

## Favourite Points



What is the notion of six degrees of separation? Why do mathematicians use Paul Erdős?



## Word Bank



What question would you ask the author?





# Chapter 6



## Chapter Summary

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## Favourite Points



Blank area for writing favourite points.

Which person would Bill James say was better, a good student who fails an assessment or a bad student who didn't turn up? Why?



## Word Bank

Blank area for writing words from the text.



What question would you ask the author?





# Submission

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# Chapter 7



## Chapter Summary

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## Favourite Points



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What is a Germain prime? What are the first five

Blank area for writing the answer to the question.



## Word Bank

Blank area for writing words from the text.



What question would you ask the author?

Blank area for writing the question to ask the author.





# Chapter 8



## Chapter Summary

## Favourite Points



Why is 6 a perfect number but 15 is not?



## Word Bank



What question would you ask the author?







# Submission

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# Chapter 9



## Chapter Summary

## Favourite Points



In what ways does infinity not behave as we would expect a number to?



## Word Bank



What question would you ask the author?



# Chapter 10



## Chapter Summary

## Favourite Points



What is the difference between a proof and a conjecture?



## Word Bank



What question would you ask the author?





# Submission

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# Chapter 11



## Chapter Summary

Favourite Points



Define the components of Euler's identity and explain its beauty



## Word Bank



What question would you ask the author?



# Chapter 12



## Chapter Summary

## Favourite Points



What base is our number system in? What would be the consequences of changing it?



## Word Bank



What question would you ask the author?



# Chapter 13



## Chapter Summary

Favourite Points



Define and give an example of a P-type problem and a NP-type problem



## Word Bank



What question would you ask the author?





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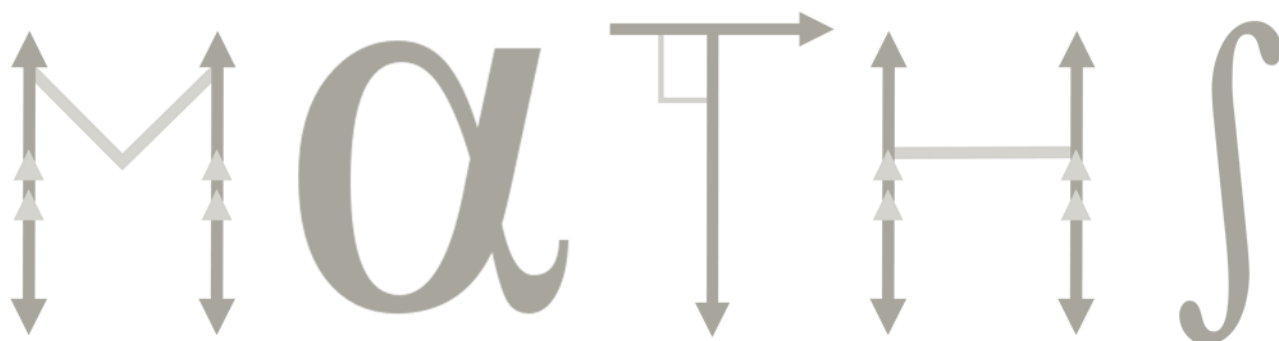
# Summary

Now that you have completed the book I would like you to write a 500 word summary of your findings.

Your summary should include

- A synopsis of the book including an overview of the areas of mathematics covered
- A brief introduction of the author and their background
- Your favourite points and why they interested you
- A discussion of any areas which you didn't enjoy or understand and why
- A concluding statement summarizing your opinion of the book. You should also explicitly identify a range of audiences whom you think would appreciate reading or otherwise benefit from the book.

Complete the Summary Notes page to help you.





# Summary Notes



What is the book about?

Rating:



What mathematical concepts are discussed?

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



Which key points interested you the most and why?



Which points did you find difficult to understand and why?





# Congratulations!

You have completed this project

Please submit your chapter summary to your  
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# Further Reading



Enjoyed the book? Try these next

