



*Saint Joseph's*

CATHOLIC SCHOOL

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Maths Department

# Yr8 High Achievers Booklet



## Year 8 Higher Ability Extra work booklet

### Term 1

#### Discovering Pythagoras

Task:

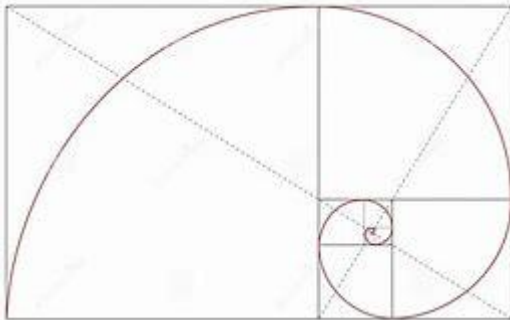
Find out the following details about Pythagoras:

- When did he live?
- Where was he from?
- What theorem is he most famous for?



Using a story picture board tell the story of Pythagoras discovering his theorem.

### Term 2



#### The golden ratio

Find out the following about the golden ratio

- Who discovered the golden ratio?
- Give examples of the golden ratio in nature
- What relationship does it have to Leonardo Da Vinci's picture 'Vitruvian Man'?

### Term 3

Most of the quantities you can measure, such as length and mass, are based on the decimal number system; however time is not. During the French Revolution, it was proposed to replace the standard system of hours and minutes with the French Revolutionary Time, in which time would be measured in powers of 10.

Investigate French Revolutionary Time and write a short report.

Write out your school timetable, including registration times and lunch, using this system.



#### **Term 4**

The ratio of height circumference for the average person is said to be 3:1. Do an investigation to see if this is true.

- Create a data collection sheet
- Decide on your population, will age matter?
- Create a chart that will represent this data
- Interpret your data
- Make a conclusion



#### **Term 5 & 6**

Now is the time to start thinking about your end of year exams. Go back through your book(s) and create a table of topics.

Good	Not so good	Need Help

GOOD: this should contain the areas within topics that you have mastered and are confident in.

NOT SO GOOD: this should contain areas within topics that you are less confident in, but with practice can master

NEED HELP: this should contain the areas within topics that you 'Just Don't Get'

This will help you identify your learning needs to succeed in your exam.

**You might want to try this with all of your subjects!**