

7.5 Grammar

Passive reporting structures

I can use passive reporting structures to talk about general feelings or beliefs.

- 1 **CD-3.12 MP3-109** In pairs, discuss the Maths facts and choose the option you think is correct. Then listen and check your answers.

Maths facts

- 1 It is thought that numbers and counting began with the number zero / one.
- 2 Arithmetic is considered to have originated around 20,000 / 6,000 years ago in Sumeria.
- 3 The Egyptians / Romans are known to have invented the numbers one thousand and one million.
- 4 Before 1500, the term Mathematics was understood to mean Astrology / Physics.
- 5 There are said to be limited / unlimited opportunities for mathematicians.
- 6 An increasing / A decreasing number of students are expected to be doing Maths at university in the future.

- 2 Read the GRAMMAR FOCUS and find examples of each pattern in the text.

GRAMMAR FOCUS

Passive reporting structures

You can use the Passive to talk about general feelings or beliefs with reporting verbs like *believe*, *know*, *think*, etc. These structures are usually used in more formal contexts.

- it + passive verb (present or past) + *that* clause
- subject + passive verb (present or past) + *to*-infinitive (*to do/to have done/to be doing*, etc.)
- there + passive verb (present or past) + *to be/to have been*

- 3 **CD-3.13 MP3-110** Read the text and find one missing word in each of the underlined phrases. Then listen and check.

- 4 Complete the sentences using the words in brackets. Don't change the order of the words provided but add any other necessary words.

- 1 It is understood that Pythagoras came up with (understand/Pythagoras/come up) the idea of odd and even numbers.
- 2 Pythagoras _____ (say/prepare) the way for many famous Greek mathematicians.
- 3 It _____ (be/think/Archimedes) is one of the greatest mathematicians of all time.
- 4 Archimedes _____ (believe/make) his most famous discovery in the bath.
- 5 The Romans _____ (not/think/be interested) in Maths.
- 6 Several other civilisations _____ (be/know/contribute) to the advancement of Mathematics.

- 5 Rewrite each sentence in two ways. Begin with the words in brackets.

- 1 We know that most mathematical symbols were invented in the 1500s. (It ... / Most ...)
It is known that most mathematical symbols were invented in the 1500s.
Most mathematical symbols are known to have been invented in the 1500s.
- 2 Historians consider the seventeenth century to be a high point in the history of Mathematics. (The seventeenth ... / It ...)
- 3 Many teachers thought that calculators could harm students' Maths skills. (It ... / Calculators ...)
- 4 They estimate that there are over 10,000 new Maths graduates every year in the UK. (There ... / It ...)
- 6 List the school subjects you study in order from most important to least important. Discuss your list with a partner. How important is Maths?

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Where do our numbers come from?

Around 500BC, the Greek philosopher ¹Pythagoras is understood to have come up with the idea of odd and even numbers. ²It said that Pythagoras prepared the way for many famous Greek mathematicians, including Archimedes. ³Archimedes is considered to be one of the greatest mathematicians of all time and discovered how to measure the volume of an object with an irregular shape. ⁴He is believed to be taking a bath when he made the discovery, and leapt out

shouting, 'Eureka!' ('I have found it!'). Unfortunately, Archimedes was killed by a Roman soldier in 212BC and Mathematics entered a dark age. ⁵It thought that the Romans just weren't interested in Mathematics. ⁶There are known to be several other civilisations, including the Maya people in Mexico and scholars in ancient China, who contributed to the advancement of Mathematics. However, the next big breakthrough was probably in 500AD, when the

Indians invented 'zero'. They had already created symbols for the numbers 1–9. In fact, ⁷it could argued that our 'Arabic numerals' should rather be known as 'Indian numerals'. After all, it was actually the Indians who invented them.

1	2	3	4	5	6	7	8	9
—	=	≡	+	h	4	7	5	?

Brahmi numerals around 300AD