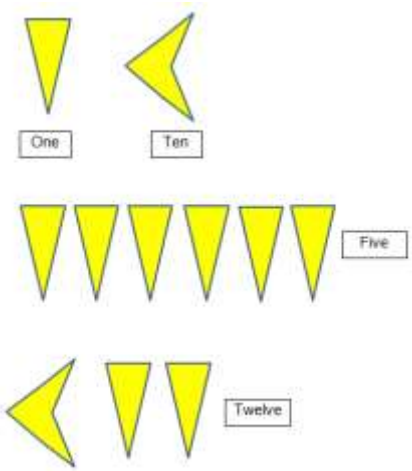
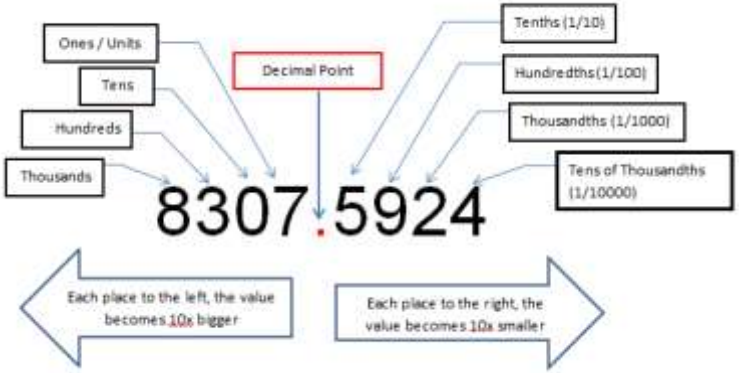
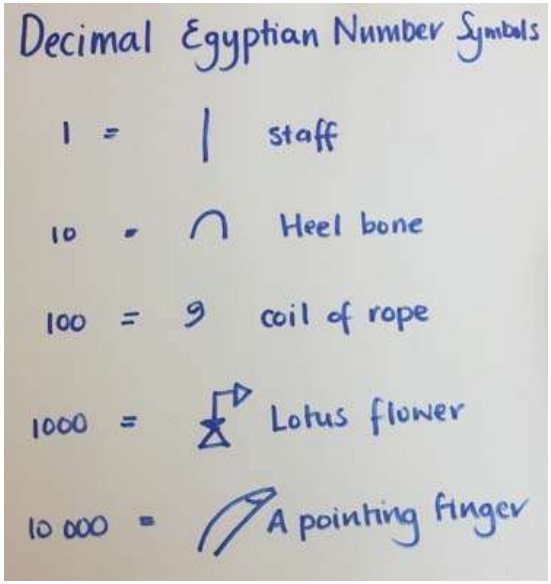
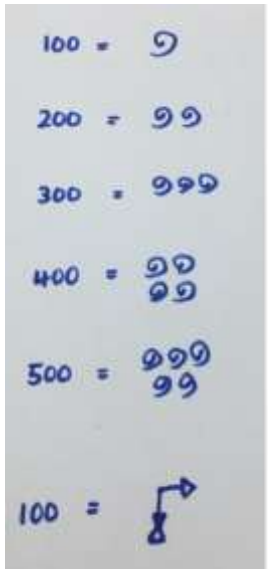
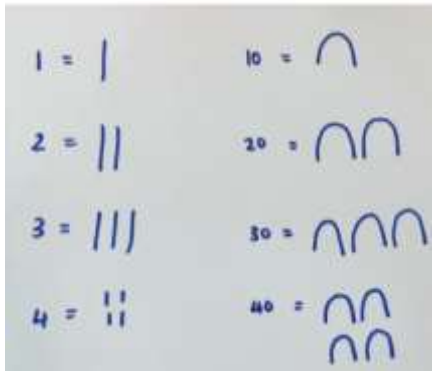
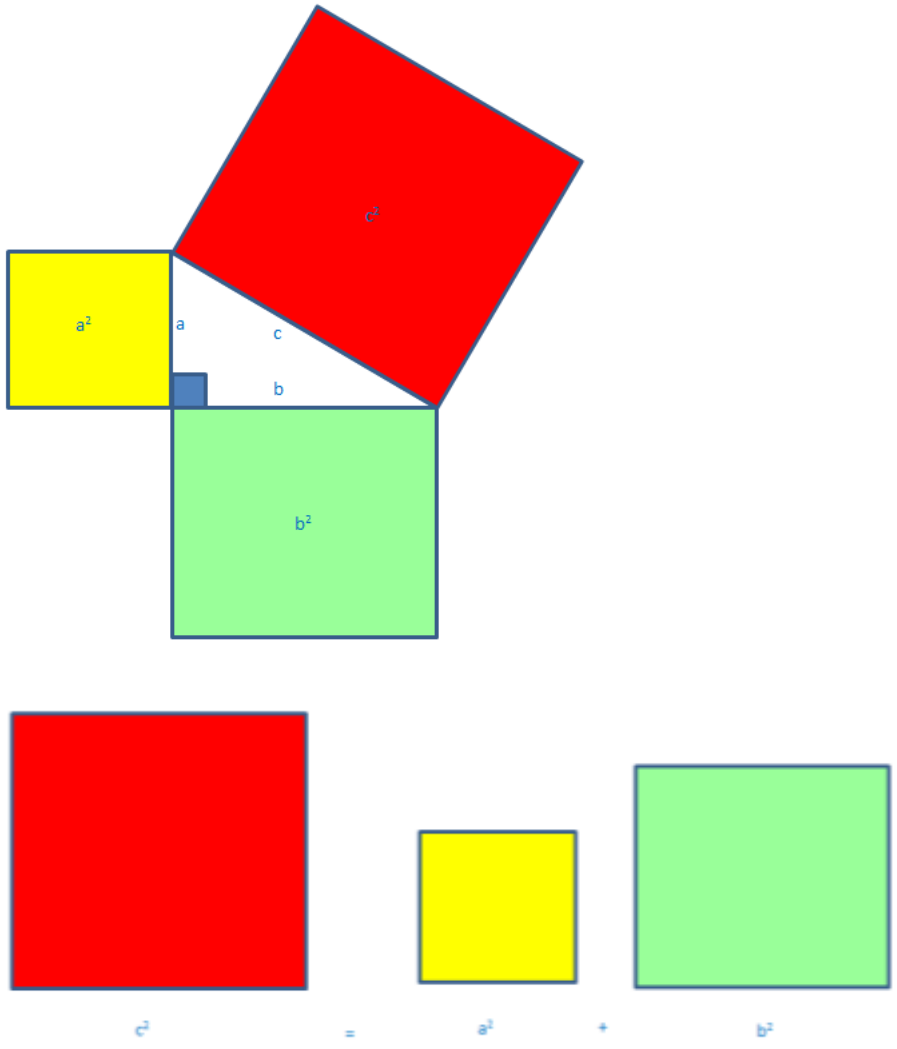
Mathematics - its impact on the world past, present and future

Terms	Illustrations	Definition
Babylonian number system		It used only two numerals or symbols, a one and a ten to represent numbers. The system got trickier with larger numbers and used a base 60 system, rather than our system of base 10.
Binary system		Only made up of only 0's and 1's. There is no 2,3,4,5,6,7,8 or 9. In a binary number each "place" represents a **power** of 2. E.g. $1 = 2^0 = 1$ $10 = 2^1 = 2$ $100 = 2^2 = 4$ $1000 = 2^3 = 8$ $10000 = 2^4 = 16$ Binary numbers are very useful in electronics and computer systems. Regardless of the type of information represented, it is all stored as bit patterns made up from the digits 1 or 0. In other words everything that is stored on the computer is eventually broken down into its simplest form, which is a pattern of 1s and 0s.

Decimal number system		The number system we use every day, based on 10 digits (0, 1, 2, 3, 4, 5, 6, 7, 8, 9). It can also be called 'base 10' system. The value of the digit depends on where it is placed in the number. This is called place value. Zero is used as a place holder which affects the value of the number e.g. 102 and 1002 – the 0 significantly changes the value of the number.
Egyptian number system		Written symbols and hieroglyphics. There was a symbol for every power of ten and the numbers were written from right to left.

	 	
Famous mathematicians		People who have contributed significantly to society through the creative and intelligent use of mathematics. Famous mathematicians have played a huge part in shaping our world as it stands today.
Fibonacci Sequence		Found by adding the two numbers before it together. e.g. 0, 1, 1, 2, 3, 5, 8, 13, 21, 34… The 2 is found by adding the two numbers before it (1+1) The 5 is found by adding the two numbers before it (2+3) The 8 is found by adding the two numbers

		before it ((3+5) The 13 is found by adding the two numbers before it (8+5) The 21 is found by adding the two numbers before it (8+13) The next number in the sequence above would be 55 (21+34) There are many areas of nature where the Fibonacci sequence can be found and some of these areas include, flower petals, plants, fruit, the human face, the human hand and animals (i.e. rabbits) Leonardo Bonacci, known as Fibonacci, founded the sequence so it was named after him.
Greek number system		Originally had 27 symbols. Our own word "alphabet" comes from the first two letters, or numbers of the Greek alphabet -- "alpha" and "beta." Greek letters were also used for writing Greek numerals. The first nine letters (from alpha to theta) were used for the numbers 1 to 9. The next nine letters (from iota to koppa) were used for multiples of 10 from 10 to 90. Finally, the next nine letters (from rho to sampi) were used for 100 to 900. For example, the numbers 1, 2, and 3 are alpha, beta, and gamma.

Pythagoras' Theorem		In a right angled triangle, the square of the long side is equal to the sum of the squares of the other two sides. It is stated in this formula: $a^2 + b^2 = c^2$ Pythagoras' Theorem was founded by Pythagoras of Samos, a Greek philosopher and mathematician.

<table>
<tr>
<td>Roman numerals</td>
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<tr><th>Base 10 Number</th><th>Roman Numeral</th><th></th><th>Base 10 Number</th><th>Roman Numeral</th></tr>
<tr><td>1</td><td>I</td><td></td><td>10</td><td>X</td></tr>
<tr><td>2</td><td>II</td><td></td><td>20</td><td>XX</td></tr>
<tr><td>3</td><td>III</td><td></td><td>30</td><td>XXX</td></tr>
<tr><td>4</td><td>IV</td><td></td><td>40</td><td>XL</td></tr>
<tr><td>5</td><td>V</td><td></td><td>50</td><td>L</td></tr>
<tr><td>6</td><td>VI</td><td></td><td>60</td><td>LX</td></tr>
<tr><td>7</td><td>VII</td><td></td><td>70</td><td>LXX</td></tr>
<tr><td>8</td><td>VIII</td><td></td><td>80</td><td>LXXX</td></tr>
<tr><td>9</td><td>IX</td><td></td><td>90</td><td>XC</td></tr>
<tr><td>10</td><td>X</td><td></td><td>100</td><td>C</td></tr>
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<td>Roman numerals were used by the Ancient Romans but we still use them sometimes today e.g. can be seen on some analogue clocks or after kings or queen’s names e.g. Henry VIII (meaning Henry the 8th).

Roman numerals use letters instead of numbers. There are seven letters you need to know:

I = 1

V = 5

X = 10

L = 50

C = 100

D = 500

M = 1000</td>
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<tr>
<td>STEM</td>
<td></td>
<td>STEM stands for Science, Technologies, Engineering and Mathematics.</td>
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