Numeracy Across the Curriculum

ICT

LOGO

Logo is a simple computer programming language which can be used to control devices. For example, a small robot known as a turtle can be moved around the floor using logo.

Command	Action
FORWARD 10	Move forward 10 steps
BACK 20	Move backward 20 steps
LEFT 90	Turn anticlockwise 90°
RIGHT 60	Turn clockwise 60°
PENDOWN	Lower pen and begin drawing
PEN UP	Raise pen and stop drawing

This table summarises the main commands used in LOGO.

LOGO can be used to draw different mathematical shapes.

Example 1: Square

FORWARD 10
RIGHT 90
FORWARD 10
RIGHT 90
FORWARD 10
RIGHT 90
FORWARD 10
RIGHT 90
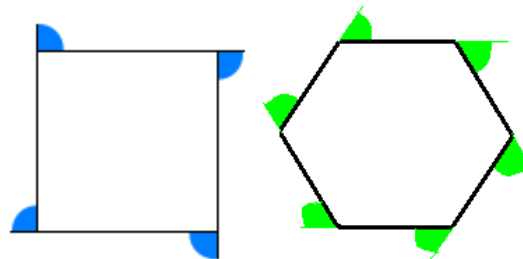
For a regular hexagon each interior angle is 120° and each exterior angle is 60°.

Example 2: Regular hexagon

FORWARD 10
RIGHT 60
FORWARD 10
RIGHT 60
FORWARD 10
RIGHT 60
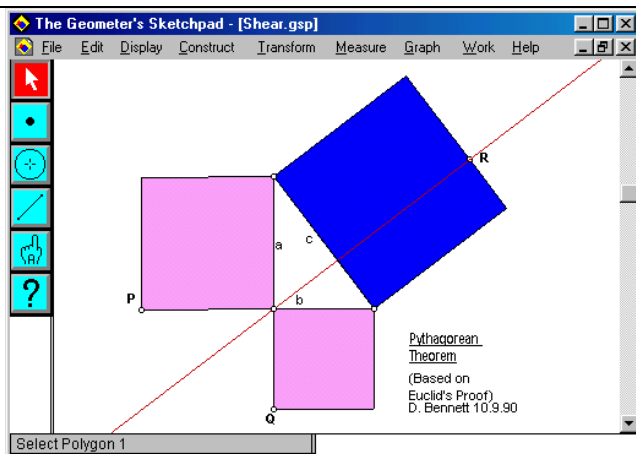FORWARD 10
RIGHT 60
FORWARD 10
RIGHT 60
FORWARD 10
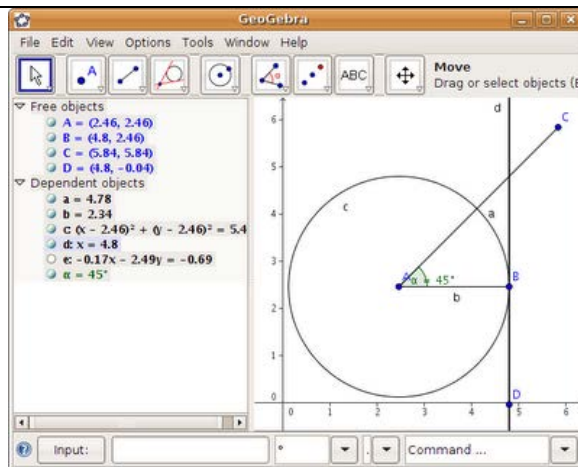RIGHT 60

Numeracy Across the Curriculum

ICT

Dynamic Geometry Software

Dynamic geometry software refers to computer programs which allow you to create and then manipulate geometric constructions. The main ones used in maths are shown below.
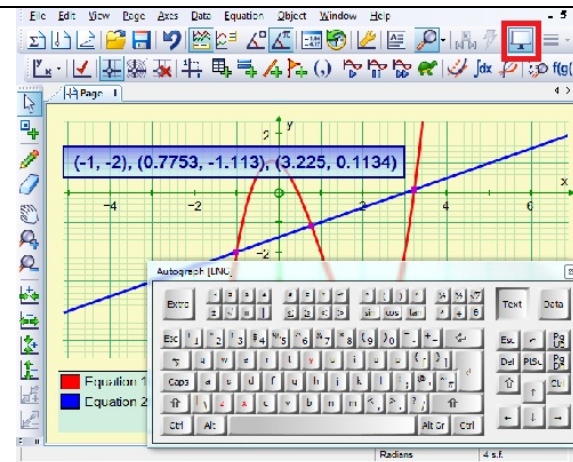
Geometer's Sketchpad	GeoGebra	Autograph

All three software programs allow you to plot graphs from equations and manipulate them. They also allow you to create geometric shapes and carry out transformations on them. GeoGebra is a free piece of software that you could download at home. Autograph is used mainly with our 6th form students.
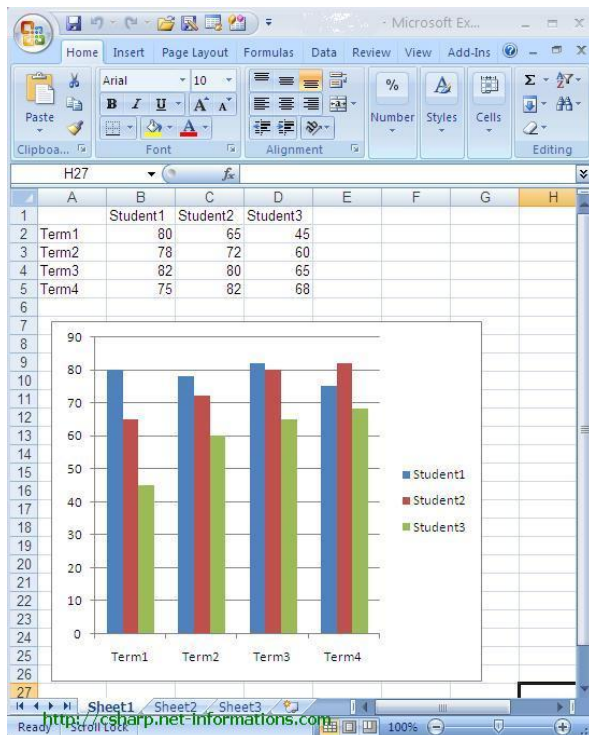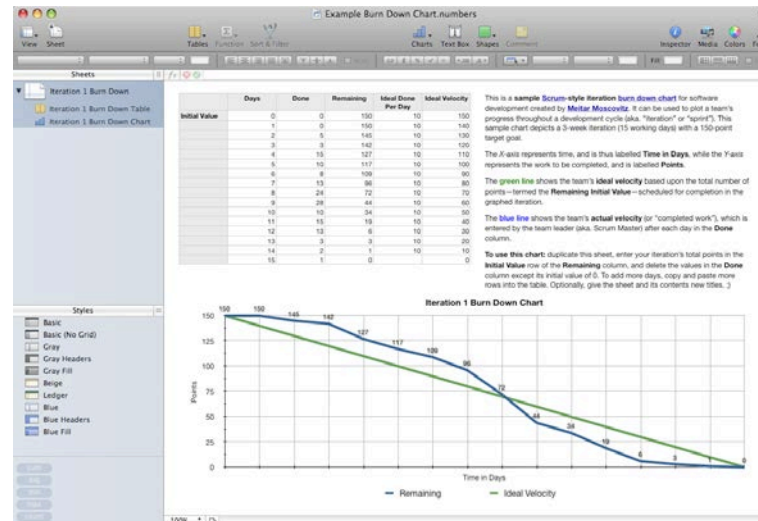
Numeracy Across the Curriculum

ICT

Representing Data

Once data has been inputted into a Spreadsheet, it can be represented in different types of charts and graphs.

PCs (Using Excel)

MACs (Using Numbers)

For both software packages the steps to creating a chart or graph are similar.

1. Input your data

2. Select your data

3. Insert a chart or graph

4. Edit the preferences on your chart or graph

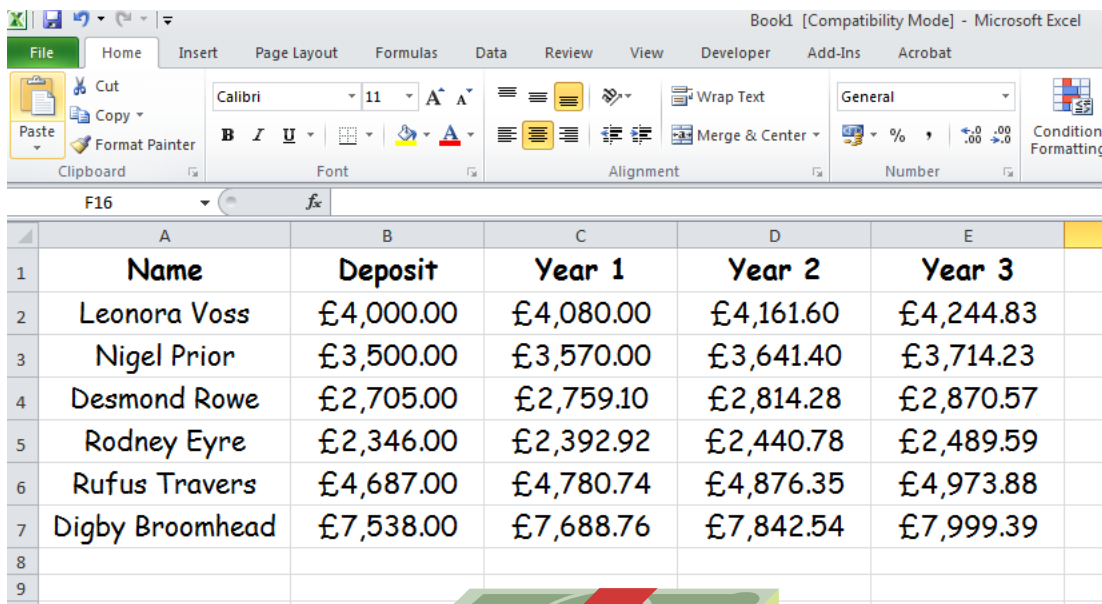Any charts or graphs you create can then be put into presentations.

Numeracy Across the Curriculum

ICT

Using formulae in spreadsheets

Using formulae in spreadsheets allows you to work out a fixed calculation for a range of inputs. At this school you will mainly use spreadsheets within Excel.

Example: A bank gives compound interest at a rate of 2% per annum on its current accounts. How much money will the following people have after 1 year? 2 years? 3 years?

Name	Deposit	Year 1	Year 2	Year 3
Leonora Voss	£4,000.00	£4,080.00	£4,161.60	£4,244.83
Nigel Prior	£3,500.00	£3,570.00	£3,641.40	£3,714.23
Desmond Rowe	£2,705.00	£2,759.10	£2,814.28	£2,870.57
Rodney Eyre	£2,346.00	£2,392.92	£2,440.78	£2,489.59
Rufus Travers	£4,687.00	£4,780.74	£4,876.35	£4,973.88
Digby Broomhead	£7,538.00	£7,688.76	£7,842.54	£7,999.39

To find 2% of a number we multiply by 0.02.
To increase a number by 2% we multiply by 1.02.

To input a formula into a cell in a spreadsheet you must always start with an "=" sign. To multiply you use the "*" symbol.

Therefore in cell C2 you would type:

=B2*1.02

[This increases the value in B2, i.e. Leonora's deposit, by 2%]

And in cell D2 you would type:

=C2*1.02 etc.