

# MATHEMATICS GCSE

(The department that counts!!)

GCSE Mathematics is compulsory for every student in years 10 & 11.

Mathematics is an important and useful tool and everybody uses it in some form in every day life. It may be something as simple as counting money, weighing things for cookery, measuring for building or harder skills such as accountancy and engineering. There is no escaping the fact that Maths is all around us and that we all need to be able to use it efficiently.

In GCSE Mathematics you will study Numbers and the Number system; Handling Data; Algebra and Shape, Space and Measure.

The course is split into 3 Units.

- Unit 1
  - This unit is roughly 30% of the course and is a Calculator paper
  
- Unit 2
  - This unit is roughly 30% of the course and is a Non-Calculator paper
  
- Unit 3
  - The final unit is worth 40% of the course and is a Calculator paper

The 3 GCSE units will be taken during years 10 & 11.

**There is NO coursework for GCSE Mathematics.**

Over the last few years at Great Sankey High School the GCSE Mathematics results have risen steadily to 75% A\* - C in summer 2009.

Visit [www.mathscareers.org.uk](http://www.mathscareers.org.uk) for information about careers in Mathematics.

### A typical grade F question

1. The times of some early evening television programmes are shown.

5: 10	Blue Peter
5: 35	Neighbours
6: 00	News

Neighbours is shown twice a day, five days a week.  
All programmes of Neighbours are the same length.

For how many hours and minutes is Neighbours shown each week? (2)

### A typical grade C question

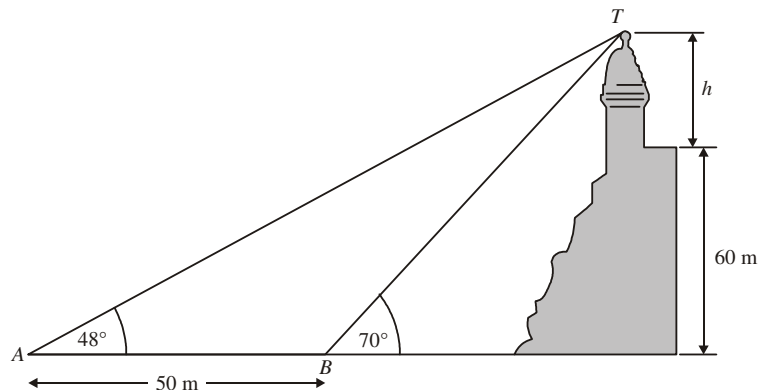
2. Forty people take a driving test at Centre A on one day.  
The table shows the results.

	Pass	Fail
Male	10	13
Female	6	11

- (a) A person is chosen at random from the group.  
What is the probability that the person is male? (2)
- (b) A person is chosen at random from the group.  
What is the probability that the person passed the test? (1)
- (c) It is known that throughout Britain the probability of a person passing their test is 0.7  
John says it is easier to pass the test at Centre A.  
Explain why John could be wrong. (1)

### A typical grade A\* question

3. Zoe wants to find the height of a tower on top of a cliff.  
From point A she measures the angle of elevation of the top of the tower,  $T$ , as  $48^\circ$ .  
She then walks 50 metres horizontally towards the tower to a point B, where  
the angle of elevation of  $T$  is  $70^\circ$ .  
The height of the cliff is 60 metres.



Calculate the height,  $h$ , of the tower.

(6)