

Why study Mathematics A levels?

- Stimulating and challenging course
- Develop key employability skills
- Increase knowledge and understanding of mathematical techniques and their applications
- Support the study of other A level subjects
- Excellent preparation for a wide range of university courses
- Versatile qualification, well-respected by employers and higher education
- Earn more!

Mathematics

- **A-Level Mathematics**
- **A-Level Further Maths**
- **AS-Level Further Maths***
- **Core Maths**

Important questions

- What does A level Mathematics involve?
- What is Further Mathematics?
- Why study A level Mathematics?
- What are the career opportunities with A level Mathematics?

What is covered in A level Mathematics?

Pure Mathematics

(66%)

methods and techniques which underpin the study of all other areas of mathematics, such as, proof, algebra, trigonometry, calculus, and vectors.

Statistics

(17%)

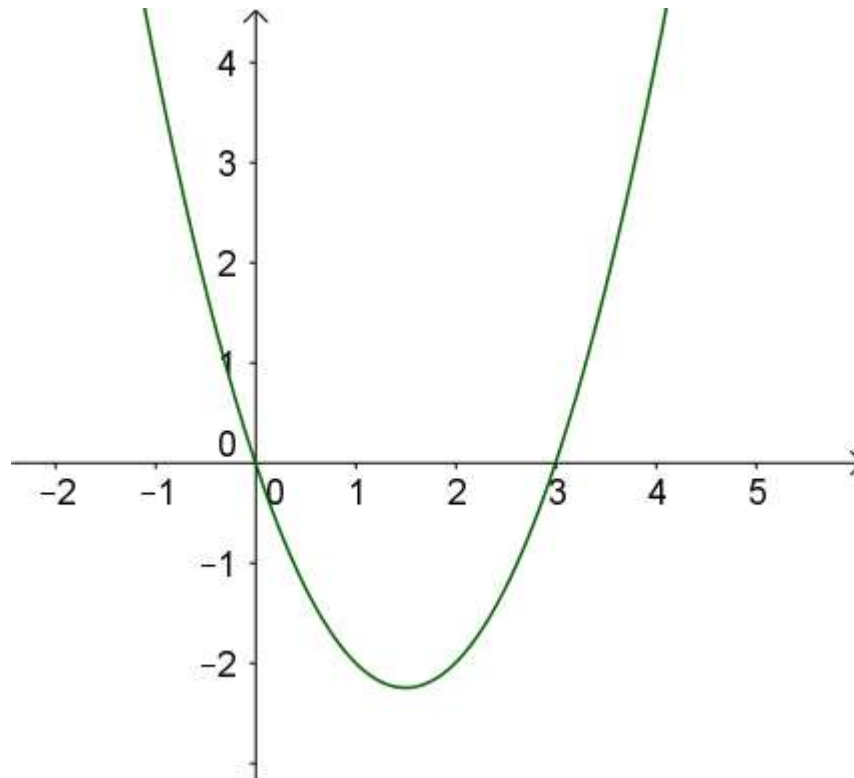
statistical sampling, data presentation and probability leading to the study of statistical distributions

Mechanics

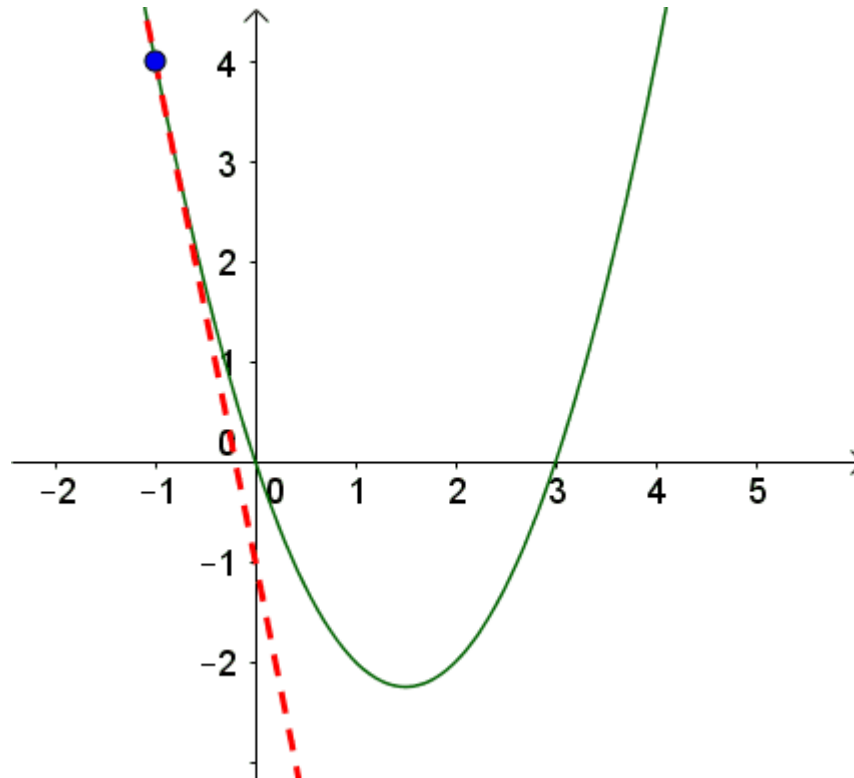
(17%)

the study of the physical world, modelling the motion of objects and the forces acting on them.

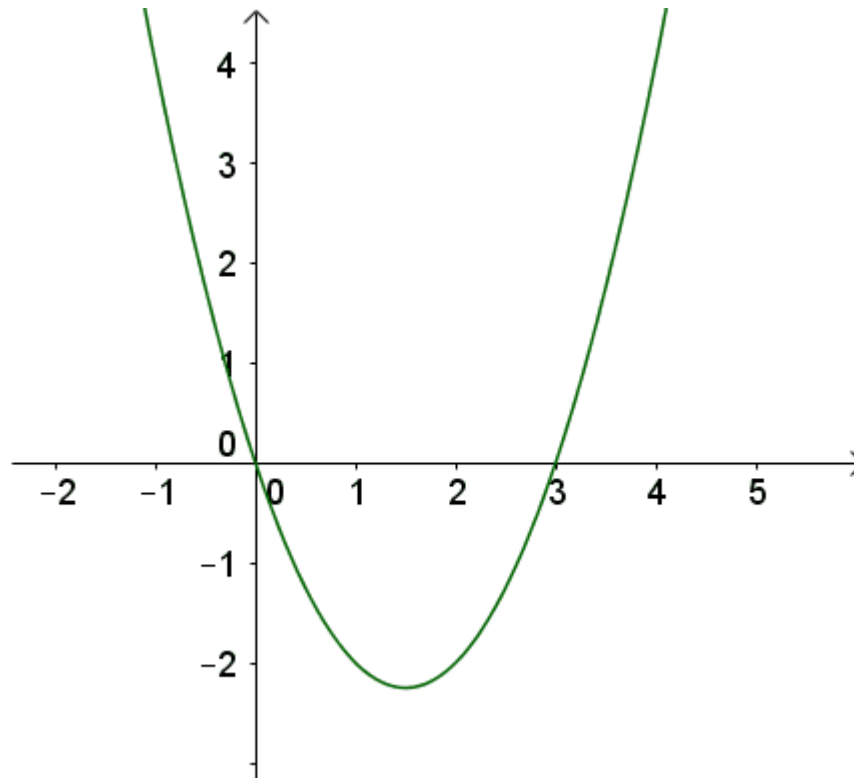
What is Pure Maths?



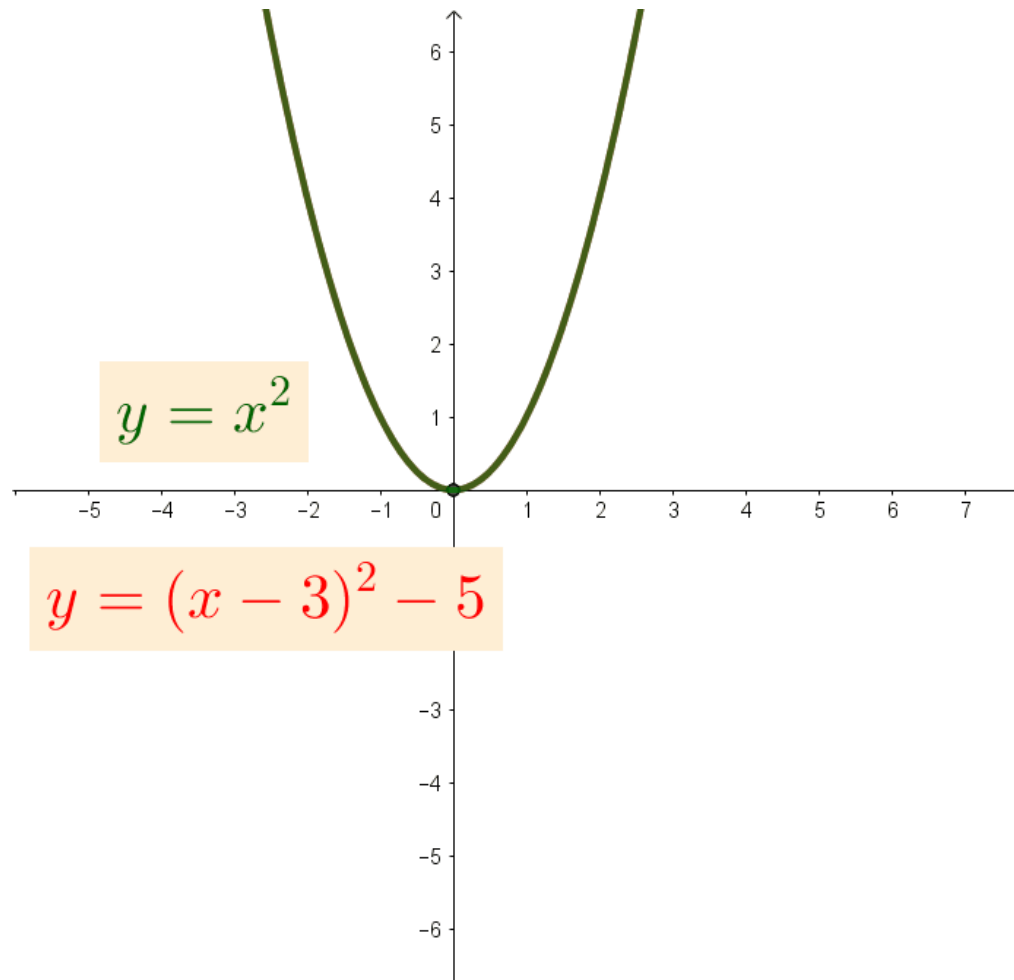
What is Pure Maths?



What is Pure Maths?



Use of technology



What is Statistics?

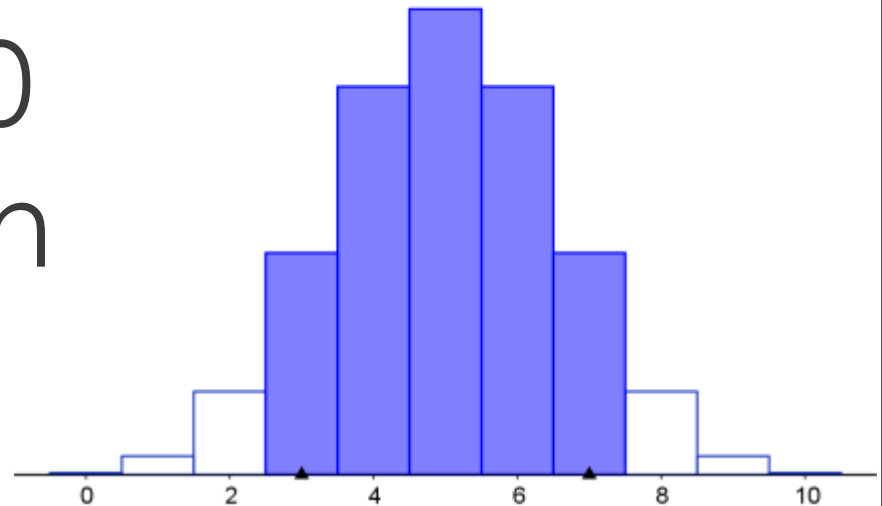


8



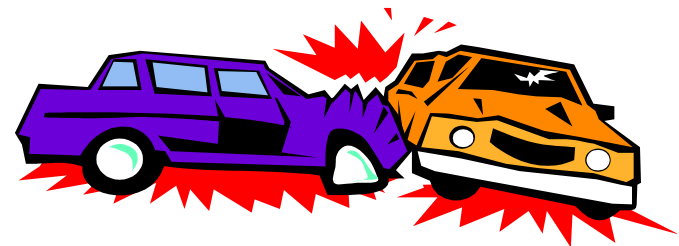
2

11% chance of
8-2, 9-1 or 10-0
with a fair coin



What is Statistics?

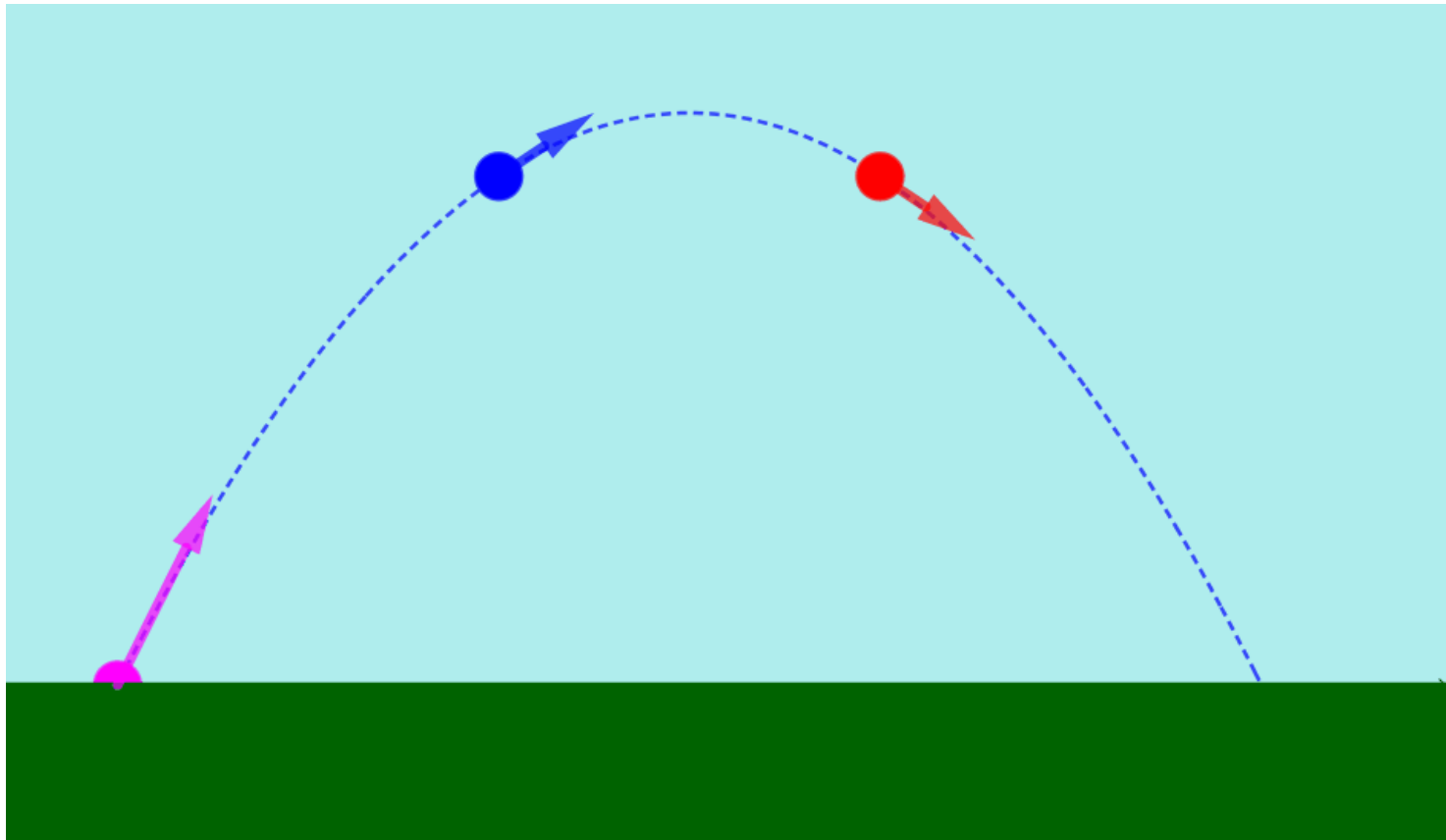
Reaching conclusions
from data



What is Mechanics?



What is Mechanics?



Assessment – A-level Maths

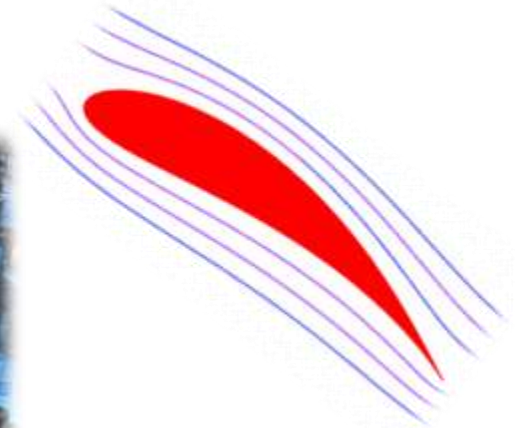
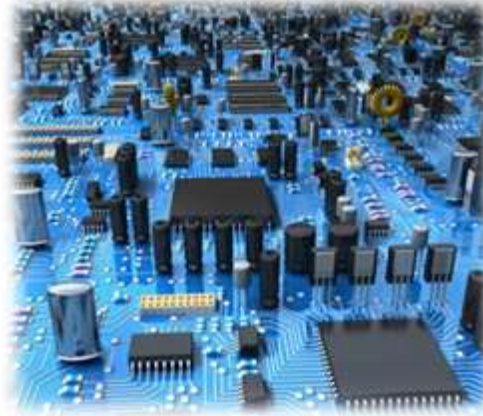
- Three 2 hour exams at the end of Year 13.
- No coursework

What is Further Mathematics?

- Further Mathematics is an additional AS/A level qualification taken alongside an A level mathematics course.
- It is designed to stretch and challenge able mathematicians and prepare them for university courses in mathematics and related quantitative and scientific subjects.

Imaginary Numbers

$$\sqrt{-1} = i$$



Only in Further Maths!

Google
UK

Matrices $\begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}$



Transition from GCSE to A-level Maths

Current Year 12 students



Current Year 13 students



Requirements

- Maths: At least a grade 6 at GCSE
- Further Maths: At least grade 7 at GCSE
- Highly motivated and hard working
- An enjoyment of the subject:
algebra, solving problems, etc.

Outside the classroom

- Tackle problems on NRICH website
- Problem Solving sessions & STEP Workshops at University of Bath
- Enrichment events at the University of Bath
- Maths challenges



Further Maths



What are the career opportunities?

