

IT DOESN'T ADD UP
what's wrong with maths?

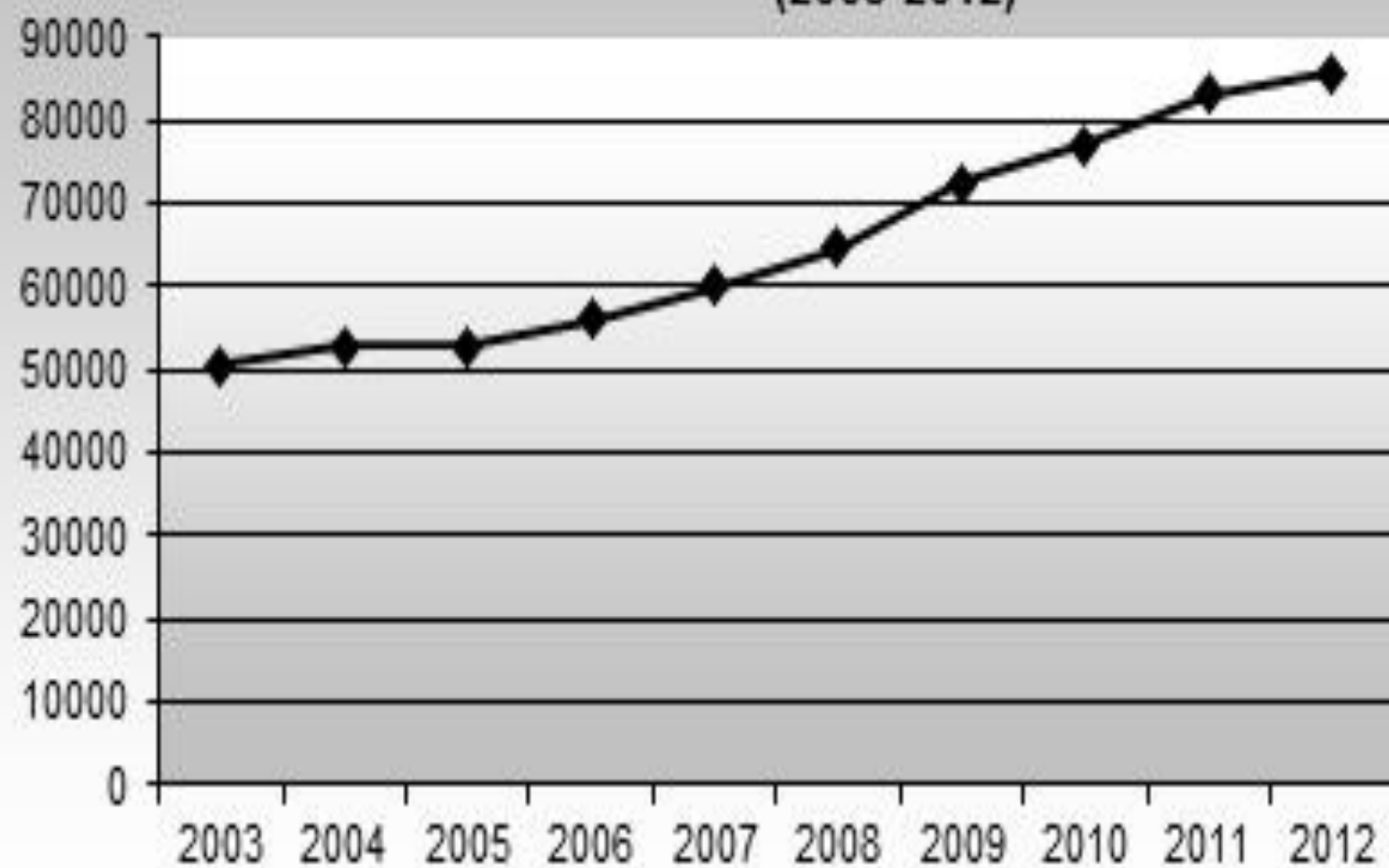


CAMBRIDGE ASSESSMENT

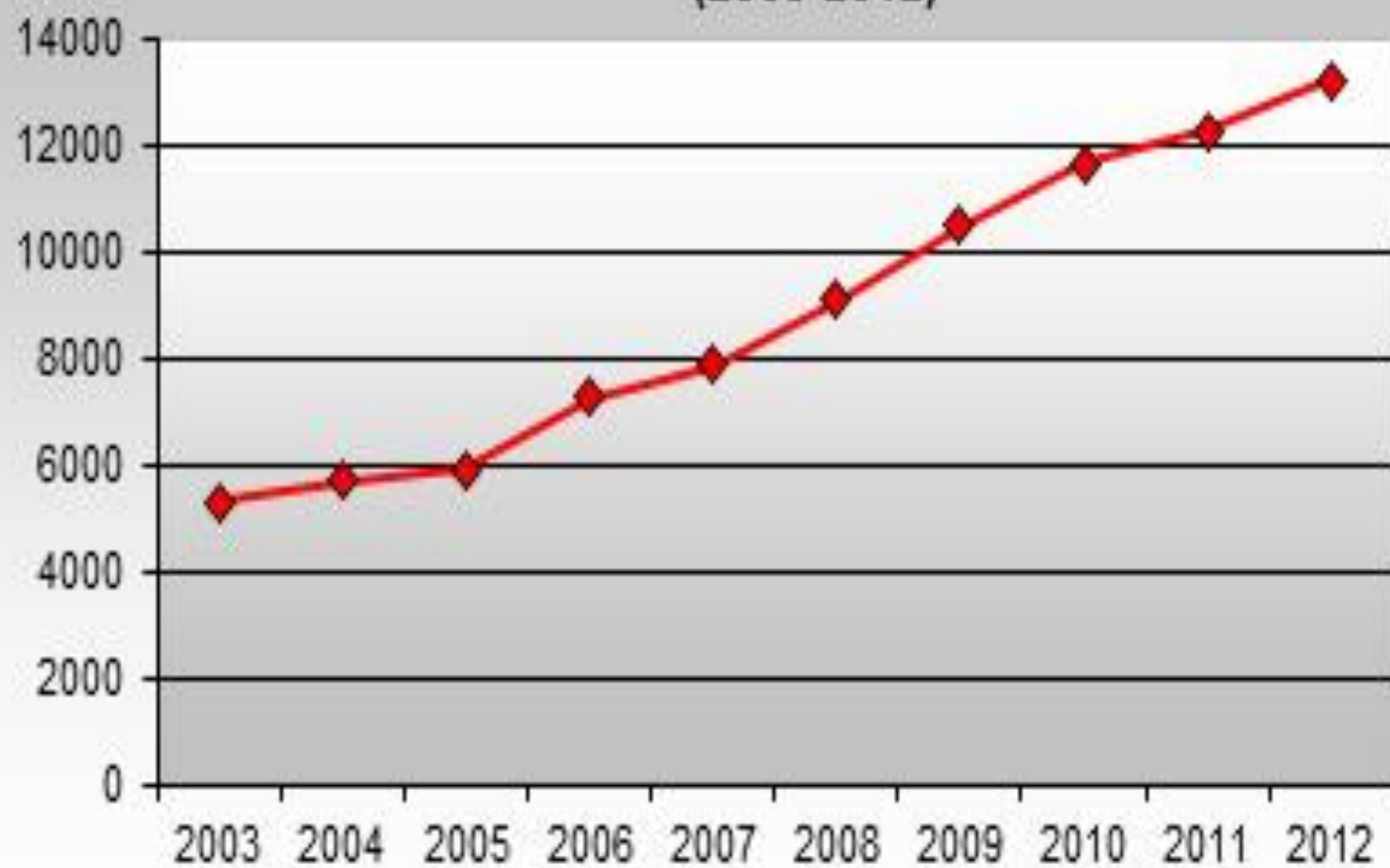
Our big debate



A level Mathematics entries in UK
(2003-2012)



A level Further Mathematics entries in UK
(2003-2012)



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Our big debate





BRITISH
ACADEMY



Higher Education Academy STEM Mathematics and Statistics in the disciplines and tackling transition

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British Library 15.05.13

Mathematics and Statistical Skills

- They are fundamental tools which students need to acquire in order to be able to understand and practice at degree level and beyond
- These skills are embedded within the curricula of many subjects both in STEM , Social Sciences and much more widely.
- Clear need for the UK HE sector to openly articulate to the secondary sector the true extent of the need for these skills in a wide range of degree subject areas.

STRATEGIC PROJECT

Need to understand state of play

- What is the level of maths and stats required?
- Quantitative versus Qualitative content - how much does this vary across certain degree subjects?
- What is the understanding /perception of students, teachers and lecturers?

Scoping a range of disciplines; what do we know?

**Business, Chemistry, Computing, Economics,
Geography, Psychology, Sociology**

Progress so far

- Literature review in 7 areas
- 6 Discussion events on tackling transition; dialogue between sectors and all parties involved.
- 7 Staff Surveys undertaken; Students about to begin
- 7 Reports will be published on the HEA website over the Summer
- Dissemination of key findings will follow
- Overarching report in Autumn

UNDERSTANDING BETWEEN SECTORS

- Genuine recognition of a lack of understanding across the sectors (pre-tertiary and HE) about what things were like on the “other side”
- Feedback indicates that dialogue between sectors was constructive in helping to create understanding and new ways of working;
- Questions about where the problem arises

STUDENT CONFIDENCE

- Psychology: discussion around **maths anxiety**,
- Sociology: discussion about the huge spectrum of ability
- Need to develop **student confidence** especially on entry to HE;
- Also discussion on who should provide maths and stats support at University to help student confidence

MATHS AND STATS IN CONTEXT

- Geography: in fieldwork and GIS and these had changed significantly in schools due to removal of assessed coursework elements, meaning the transition is now harder
- Chemistry: the need for the maths to be placed in context. E.g. so the student is able to use different variables
- Psychology: Perceived need to teach statistics in a way that had relevance to real life, and promoted problem-solving skills.
- Sociology: not comfortable with using numbers to describe the social world

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