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## Pocket Watch – Counting on the maths

### Introduction

It's been another intense week in the headlines for maths with the Government announcing a new **qualification**, an international skills **survey** highlighting further alarming data on the levels of adult numeracy in England and the DfE adding to this with some further **data** on low level maths attainment for 16-18 year olds in the past. The two sets of data in particular have provoked further soul searching but with the Government embarking on a 'top to bottom' overhaul of school maths and all Parties committed to raising both performance and participation levels in maths, what are the problems we face and will the current reforms help?

### What are the problems?

Essentially a mix of low expectation, low participation and consequentially low levels of attainment. The evidence lies in a range of statistics: that infamous drop to 27<sup>th</sup> in the PISA numeracy rankings for 15 year olds in 2009, 37% of 16 year olds failing to achieve a C grade in maths GCSE in 2010, one of the lowest among OECD countries in teaching time at age 14 (116 hours a year against Korea's 137) let alone for carrying on with maths beyond the age of 16. And now this, the first set of 'PISA' type ranking for older learners and when it comes to numeracy amongst 16-24 year olds, a lowly position of 21<sup>st</sup> out of 24 countries. It's not of course a new problem, Governments of all persuasions have been devising strategies to tackle it for some time, a number of leading organisations, (PfEG, National Numeracy, ACME, MEI and others) are leading on specific developments, last winter's TIMMS results were more hopeful and in fairness, the challenge here is as much cultural ('can't do maths') as anything else.

### Will the current reforms help?

The Government of course hopes so and is putting its might behind a major, 'top to bottom,' overhaul of the school curriculum with a stricter emphasis on more formal learning at every level with more formal assessment to go with it. So under the new National Curriculum, primary school pupils will be required to master essentials in number, measurement, geometry and statistics, know for instance their 12 rather than 10 times table by age 9 and be prevented from using calculators in their KS2 tests. KS3 builds on this to include reasoning, algebra, ratio and probability while the new GCSEs at KS4, being developed for 2015, will incorporate more demanding knowledge requirements. And at A level, maths and Further Maths from 2016 will be quality assured by leading universities and examined at the end. Nor is this all. Budgeting and finance will appear for example in Citizenship courses, 16 year olds without a GCSE are now required to carry on studying for maths, new Maths Specialist Schools are being established and a new specialist maths course for HE entrants is being developed.

### Where will this new maths qualification fit in?

Developed by the Advisory Committee in Maths Education and aimed at the 40+% who've already passed maths GCSE, it will provide a flexible opportunity (it can be taken over 2 years in about 2/3 of the teaching time needed for an AS) for those carrying on with maths perhaps for the Tech Bacc, a cv, an entrance requirement or whatever. Built around 4 areas: numbers, algebra, probability and statistics, it will incorporate problem solving and application of technology and hopefully see more young people continuing to study some form of maths.



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