New report highlights lack of progress in improving the UK’s numeracy and signals concerns for productivity in the post-Brexit era.

Charity puts forward new approach to improving the population’s number skills and calls on government and employers to recognise the scale and urgency of the problem.

Poor numeracy remains endemic in the UK with a quarter of adults unable to work out a simple percentage increase in hourly pay rates, according to a new report out today (July 11) from the charity [National Numeracy](https://www.nationalnumeracy.org.uk)\*.

**Press Release**

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The report, [The Essentials of Numeracy: a new approach to making the UK numerate](https://www.nationalnumeracy.org.uk/sites/default/files/nn124_essentials_numeracyreport_for_web.pdf), says that people’s poor numeracy is often not detected and it calls on employers to recognise that some of the millions of people who struggle with numeracy may be in their own workplace. It says that initiatives to improve adult numeracy so far seem to have had little effect and poor maths skills among adults is now too big a problem to be left to the education and training system alone.

The report, supported by the professional service company KPMG, is being launched today at an event at the Bank of England. It draws on a wide range of evidence, including a recent survey carried out for National Numeracy by YouGov and new research from the Money Advice Service (MAS).

The YouGov poll asked 2,000 adults to calculate the new rate of pay of someone paid £9 an hour who receives a 5% pay increase. Almost one in four (23%) were unable to answer correctly. Two further questions – one about simple interest on a savings account and the other about exchanging pounds for dollars – were asked, with only one in six people (17%) getting all three questions correct.\*

The poll also revealed that almost nine out of ten people (89%) felt it was important to the UK economy to improve numeracy skills among the general UK population and half of those questioned said they had reasons for wanting to improve their own numeracy and maths skills (49% said they did not want or need to improve).

MAS research to be published later this year will show how poor numeracy – independent of other factors including income – makes people less likely to save money and more likely to use credit badly.

Previous research by [Pro Bono Economics](https://www.nationalnumeracy.org.uk/cost-outcomes-associated-low-levels-adult-numeracy-uk-2014) estimated that poor numeracy costs the UK (the Exchequer, employers and individuals) £20 billion a year. Further analysis of this research has put the average cost to an individual with low numeracy at £460 a year.

Against this background, National Numeracy has worked with maths specialists and employers to develop an alternative solution: an explicit, national focus on the ‘[Essentials of Numeracy’](https://www.nationalnumeracy.org.uk/essentials-numeracy), that is, the practical maths skills and understanding that everyone needs in order to cope with everyday life and to function well at work. The charity wants its approach to be embedded within workplaces and is seeking to work with businesses and other organisations to help them identify poor numeracy skills, tackle negative attitudes to maths and support those employees and clients who need to improve.

The resources it offers are based on the charity’s online [National Numeracy Challenge](https://www.nnchallenge.org.uk/home/index.html) which is also available for individuals to use directly. So far around 100,000 people have begun to check their numeracy online using the Challenge and of those who have used the resources available, three-quarters have improved their numeracy. Having seen that it works, the charity now wants to scale up the initiative to reach many more people.

Andy Haldane, chief economist at the Bank of England and a trustee of National Numeracy, said: “Poor numeracy can hit workplace productivity and also has profound economic and social effects for households who fall into problems with debt and financial hardship. Data from the 100,000 who have already engaged with the National Numeracy Challenge shows that improving basic numeracy online at low marginal cost is possible. The Essentials of Numeracy report is a key milestone to begin to tackle these important societal issues. Next, we need to see such initiatives on scale to bring about real improvements to support the economy.”

Mike Ellicock, chief executive at National Numeracy, said: “Now, more than ever, we need new solutions to this very old problem. With Brexit on the horizon, better number skills are a blatantly obvious requirement for upping the UK’s game in terms of productivity. We know that millions of people have a real fear of numbers - but we can help everyone to overcome this and get the Essentials of Numeracy. For this we need people to ‘just do it’, employers to recognise the numeracy deficit within their own workplace and work with us to remedy it. And we want government to acknowledge the scale and urgency of the problem and support us in action to crack it.”

In her foreword to the report, Melanie Richards, vice-chair of KPMG UK, said: "Many of the 17 million adults with poor numeracy are now out of reach to the education system, meaning employers must play their part too. Businesses have a vital role to play in helping the millions of adults held back by a lack of basic numeracy….If we are to solve the UK’s long-standing productivity puzzle, improving basic skills in the workforce will be a key challenge for the business community to tackle.”

Broadcaster and TV mathematician Rachel Riley said: "I make no secret of the fact that I love maths but I also know not everyone is like me and many were thrilled to have left trigonometry and algebra behind in the classroom. But there is some maths that everyone really does need a grasp of to make good, informed decisions both at home and at work, which is why I wholeheartedly support the Essentials of Numeracy.”

\*These are National Numeracy’s own calculations, based on the raw data provided by YouGov. The questions are included in a [Quick Quiz](https://nn.typeform.com/to/dVyBzD) by National Numeracy. This also includes questions about people’s attitudes to maths and numbers and serves as an introduction to the full Challenge Check-up which allows people to find out if they have the Essentials of Numeracy.

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**Notes to editors:**

National Numeracy is an independent organisation committed to transforming attitudes and achievement in numeracy across the age range. In particular it focuses on those with low levels of numeracy. At its launch in March 2012, it highlighted the 16.8 million adults of working age in England with numeracy equivalent to the levels expected at primary school. National Numeracy is a registered company (company no: 7886294) and charity (charity no: 1145669).

http://www.nationalnumeracy.org.uk

KPMG LLP, a UK limited liability partnership, operates from 22 offices across the UK with approximately 13,500 partners and staff. The UK firm recorded a revenue of £2.07 billion in the year ended 30 September 2016. KPMG is a global network of professional firms providing Audit, Tax, and Advisory services. It operates in 152 countries and has 189,000 professionals working in member firms around the world. The independent member firms of the KPMG network are affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. Each KPMG firm is a legally distinct and separate entity and describes itself as such.

All figures, unless otherwise stated, are from YouGov Plc. Total sample size was 2115 adults. Fieldwork was undertaken between 7th - 8th June 2017. The survey was carried out online. The figures have been weighted and are representative of all UK adults (aged 18+).

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National Numeracy YouGov Survey 2017

Summary of Key findings

Participants were asked to answer three everyday maths questions and were asked a number of other questions testing their opinions. There was no time limit given to answer the questions.

The maths questions and results were as follows:

• Susie is paid £9.00 per hour. If Susie gets a 5% pay increase, what is her new pay per hour? 77% of respondents gave the correct answer - £9.45

• Fiona inherits £8,400 and invests the full amount in a savings account which pays 2.5% interest per year. How much interest does she earn in the first year? 63% of respondents gave the correct answer - £210

• For the following question, please round your answer to the nearest 10 dollars. Please imagine the current exchange rate for US dollars is £1 = $1.22. How many dollars should you get for £210? 23% of respondents gave the correct answer - $260

Just 1 in 6 people surveyed (17%) answered all three questions correctly and 15% failed to give the correct answer to any of the questions. \*

On each of the three questions, (a) men consistently performed better than women, (b) ABC1s outperformed C2DEs, (c) people working full-time (and full-time students) performed better than the unemployed and those not working.\*

There were marked regional differences. Scotland achieved the highest scores, with 24% getting all three questions correct (compared to 17% nationally), while in the North East only 6% achieved this. The West Midlands also underperformed, with 20% getting none of the three questions correct (compared to 15% nationally).\*

Other findings

9 out of 10 people rated their maths and numeracy as satisfactory or better (18% ‘excellent’, 42% ‘good’, 31% ‘satisfactory’), with little variation across gender (93% for men v 88% for women), age, social grade (93% for ABC1 v 87% for C2DE) or employment status. This is in spite of 5 out of 6 people failing to answer all three maths questions correctly.

7 out of 10 people (71%) agreed or strongly agreed with the statement “I feel confident with maths”, while 1 in 4 (25%) agreed or strongly agreed with the statement “I can’t change my ability to do maths”. Those who felt confident or disagreed about not being able to change their ability to do maths did better with the maths questions (70% and 67% respectively getting two or three questions correct, compared to 60% of respondents overall).\* \*\*

1 in 2 people (51%) indicated that they had reasons for wanting to improve their numeracy, and this was particularly strong in the 18-24 (71%) and 25-34 (72%) age categories. Regionally, respondents in London were most likely to have reasons for wanting to improve their maths and numeracy skills (66%), whilst the North East was by far the lowest (23%). The most common reasons for wanting to improve were personal development (given as a reason by 32% of all respondents), managing money better (e.g. budgeting, finances, getting the best deals, shopping, etc.) (17%) and getting a job or better job (15%).

Nearly 1 in 3 people (30%) said that the maths they had studied at secondary school had not prepared them well to make decisions in their daily life. Among 35-44 year olds this rose to 37%.

Almost 9 out of 10 people (89%) said that it was important to the economy that we improve numeracy skills in the UK. This was of particular importance to the 55+ age group (93%), and of less importance to the 18-24 age group (79%).

People were less likely to be embarrassed about telling someone they were no good at maths and numbers than they would be about telling someone they were no good at reading and writing – 61% compared with 78%.

Not only did men do better than women in the maths questions, but women also expressed less confidence with maths (32% of women disagreed with the statement I feel confident with maths compared to 18% of men), were less likely to be embarrassed about saying they were no good at it (63% of women v 60% of men) and were more likely to feel they could not change their ability with maths (27% of women v 23% of men).

*\*These are National Numeracy’s own calculations, based on the raw data provided by YouGov.*

*\*\*This suggests a link between performance and positive attitudes to maths including a belief in the possibility of improvement (‘growth mindset’), says National Numeracy. Similar links are revealed by the charity’s own findings with the National Numeracy Challenge.*