# Maths Problem-Solving Sessions for Sixth Formers at The Exeter Mathematics School

Year 12 students are invited to join a series of maths problem-solving sessions taking place on Saturday from 10:00 to 13:00 at The Exeter Mathematics School from January 2017 to April 2017.

The sessions offer students the opportunity to develop their problem-solving skills by trying out challenging problems that require deep mathematical thinking, and so help them achieve the grades they need to get into the university or career of their choice.

The problems students will tackle are fun and rewarding. Attending the sessions will enrich students' mathematical experience.

Students will look at problems from a range of sources including Sixth Term Examination Papers, Advanced Extension Award and Oxford Entrance Papers.
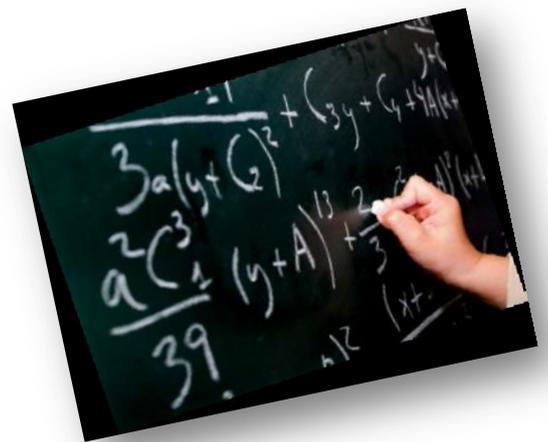
The sessions are not just for students who intend to sit any of these exams or even just for those planning to study maths at university. They are for anyone who is studying A-level mathematics and who enjoys solving challenging problems.

The sessions will take place at the Exeter Mathematics School with course tutor Nick Geere.

Funding from the DfE has enabled this series of sessions to be free to students in state funded schools. Students from independent schools are welcome to attend the problem solving workshops at a cost of £50 per student. Students will be offered refreshments after each session and a problem-solving book.

WHO? Year 12 students who enjoy maths and solving problems.

WHEN? Saturday 14th January, Saturday 28th January, Saturday 18th March, Saturday 25th March, Saturday 22nd April.

WHERE? The Exeter Mathematics School;
http://www.exetermathematicsschool.ac.uk/contact/

If you have any questions or want to register students for the classes then please e-mail Susie Catling at SusieCatling@exetermathematicsschool.ac.uk or margaretharding@furthermaths.org.uk

Some problems for you and your students to try!

These are reproduced with the permission of the United Kingdom Mathematics Trust http://www.ukmt.org.uk/ and feature in "A Problem Solver's Handbook" by Andrew Jobbings. All students attending the sessions will receive a free copy of this book.

The diagram shows a square ABCD and an equilateral triangle ABE. The point F lies on BC so that EC = EF. Calculate the angle FEB.

_____
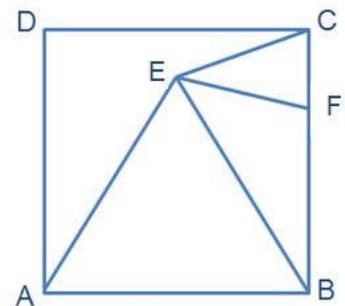
A particular four-digit number N is such that

a) the sum of N and 74 is a square; and

b) the difference between N and 15 is also a square.

What is the number N?

_____