



# iq

## ARE YOU A MATHS & LOGIC MAESTRO?

If you have a mind for maths, logical reasoning, cryptic clues and other conundrums, send them to us and we will publish the most difficult in these very pages.

If you are interested, contact [social@theactuary.com](mailto:social@theactuary.com)



### On the ball Member puzzle 13

Courtesy of the editor, Dan Georgescu



My daughter was asked to design a box to store 12 ping pong balls for school. Each ball is a sphere with a diameter of 3cm, and they must not rattle inside the box. She decided to make the box as a right triangular prism with an equilateral base and store the balls in four rows of three.

**What is the volume of the box?**

### Floral arrangement Mensa puzzle 810

On each row place a word beginning with 'A' to fit the clue given.

**When completed a type of flower will be read down the shaded column. What is it?**


Relating to England

A venomous snake

A savoury jelly

A letter of the alphabet

Evidence of being elsewhere

Directed



### A numbers game Mensa puzzle 811

What number should replace the question mark?

5914

6751

4804

3512

231?

Member puzzle 13 answers – The height of the box is  $4\sqrt{3}$  cm. The base triangle has length  $(3+\sqrt{3})$  cm and height  $\sqrt{3}$  cm, therefore the area of the base is  $(2\sqrt{3} + \sqrt{3})$  cm<sup>2</sup>. Finally, the volume is  $5\sqrt{3}(3+\sqrt{3})$  cm<sup>3</sup>.  
Mensa puzzle 810 – Orchid. The words are ANGLIO, ADDER, ASPIC, AITCH, ALIBI and AIMED. 811 – 1, in each group the two outer digits are added to give the second digit and subtracted to give the third digit.