# Elevenses—Being 11 Easy Teasers for G4G11

**by**

**Chris Maslanka**

(maslanka@easynet.co.uk)

1. Which is the first multiple of 11 the sum of whose digits is odd?

2. If PAT/TAP = PT/TP—how many distinct numbers could APT be? (Keep it proper!)

3. At Elevenses I had a coffee and two different cakes. I spent £11 on the coffee. Unbeknownst to me, the cashier multiplied the 3 prices in pounds instead of adding them. It made no real difference as the numerical result was the same. How much did I spend altogether? (£1 = 100 pennies) (Hint to physicists: Best not to work in Cubic Pounds.)

4. Move 4 digits to render this equation non-trivially correct:

   11111.1 = 1.11111

5. "I cut off each corner symmetrically from the original block and arrived at an 11-faced convex polyhedron, thereby adding 18 edges and 12 corners." Thus spake the maths grad now working behind the Jedda Cheese counter. Which simple convex polyhedron had he started out with?

6. The 11 houses of Coffee Crescent are equally spaced around a circle. The owners— for patriotic reasons— determine that each front door should be painted red, white or blue, and that no pair of adjacent houses should have doors of the same colour. How many distinct ways are there of doing this?

7. A box contains 2 boxes each of which contains 3 boxes each of which contains 4 boxes each of which contains 5 boxes, each of which contains 6 boxes, each of which contains 7 boxes each of which contains 8 boxes each of which contains 9 boxes each of which contains 10 boxes each of which contains 11 boxes. How many boxes is that all together?

8. In *No Rest For The Wicket* we read of a cricket XI so bad that each man is always bowled out first ball. In their first innings there were no byes and there were no no-balls. Unsurprisingly they were all out for a duck. What was the number of the last man in?

9. I was taking tea with Yuri Pelmy at the Department of Unclear Physics. There was one spoon and it had already been used to stir tea, and was wet; so that a thin layer of sugar adhered to the inside and the underside. “If you measure out *your* usual number of spoonfuls of sugar and then stir,” said Yuri, “you will have more sugar than usual; if I measure out *my* usual number of spoonfuls of sugar and then stir, my tea will be exactly as sweet as if the spoon had been dry”. I looked down into the cup and watched the tea-leaves swirling downwards into the dark tea like bats whirling up into the night sky. How many sugars do we each take?

9. Doc Logic subscribed to the 11-volume edition of the *Encyclopaedia of Rational Behaviour.* He received one per month, starting with the first and ending with the 11th. As each one (after the first) arrived, he put it to the right of the one before, except— provocatively— for one of them, which he placed between the 4th and 5th volumes. Give a possible rationale.

10. (One for Smull):
    a) Use Roman numerals to “prove” that 11 X 11 equals 1
    b) Prove a horse has 11 legs

11. Last but not least, three cheers for one MG:
    CHEER + CHEER + CHEER = MARTIN (usual rules apply!).



maslanka@easynet.co.uk
Twitter: @ChrisMaslanka