

Maths Challenge – Week 55

Welcome to week 55 of our weekly maths challenge, with problems and puzzles posed by Gordon Burgin, Andrew Holt, Rod Marshall, Ian Stewart and the [U3A Maths and Stats Subject Adviser](#) - David Martin.

If you would like to share your ideas on how to solve these puzzles please join our [learning forum](#) or discuss within your U3A and interest group. **Check back each week for the solutions** and let us know how you get on by contacting u3a office. New maths puzzles will go up onto the website every Thursday.

Week Fifty-five

Question 1.

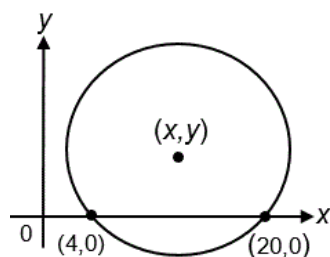
Five chocolate cakes and five jam tarts are worth the same as two chocolate cakes and eleven jam tarts. How many jam tarts is a chocolate cake worth?

Question 2.

Two types of tickets were sold for a concert held at an amphitheatre. Tickets to sit on a bench during the concert cost £75 each, and tickets to sit on the lawn during the concert cost £40 each. Organizers of the concert announced that 350 tickets had been sold and that £19,250 had been raised through ticket sales alone. What number of bench seats and lawn seats were sold?

Question 3.

In the xy -plane below, the circle has centre (x,y) and a radius of 10. What are the value for the centre coordinates (x,y) ?



Question 4.

Numbers are said to be in arithmetic progression if the difference between successive numbers is constant – e.g. 4, 7, 10, 13 ...

Find three integers in arithmetic progression whose product is prime.