1. Parking Bays

You work for a campsite owner. He wants to sell bays in his campsite and wants to include parking for the campers' car beside their tent. The owner wants the parking bay to be suitable for different sized cars and so wants the bays to be as follows:

The length of a bay is 5 m longer than the width of the camper's car.
The width of the bay is 2 m longer than the width of the camper's car.

Draw a diagram to show the area of the car parking space for any width of car.

If the width of John's car is 1.5 m, what area will his parking space be when he buys a campsite bay.

2. Sums of Pairs

Caroline has three numbers. She adds them in pairs and records the answer in each case. When she does this she has three different totals: 11, 17 and 22.

What are the three numbers Caroline had to start with?

Can you describe a method that would enable you to work out the three numbers given any three totals?

3. A Walk Around the Earth

Suppose you are six feet tall and walk around the Earth's equator.
How much farther does your head travel than your feet?

4. Burning Candles

Two different candles are lit. They burn at different rates and one is 3 cm longer than the other.

The longer one was lit at 5.30 p.m. and the shorter one at 7 p.m.
At 9.30 p.m. they were both the same length.

The longer one, burned out at 11.30 p.m. and the shorter one burned out at 11 p.m.

How long was each candle originally?

5. Bernie's Field

Bernie has been given a field in the shape of a triangle. Two sides of the triangle are exactly 10 metres long.

What is the largest possible area, in square metres, of Bernie's triangular field?