Challenge 1

Patrick, a fanatical swimmer, decided to swim around his home bay. Each day he swam a little less, due to exhaustion, but his pattern started off as 21 km day one, 18 km day two, 15 km day three, and so on.

● How many days did it take Patrick to swim the 81 km around his home bay?

Answer:

Decreasing pattern

21km + 18 + 15 + 12 + 9 + 6 =

81 km in **6 days**

Challenge 2

What is the mystery number?

→ It is an even number.

→ It is less than half of one hundred.

→ Its two digits added together equal 10.

→ It cannot be evenly divided by 3, 4, 5, 6, 7, 8 or 9.

Answer:

Mystery number = **46**

Challenge 3

Campbell's bicycle shop in Birmingham only sells the latest helmets for £60 and lycra bike shorts for £35. One Saturday morning Campbell sold 10 items for a total of £425.

● What combination of helmets and bike shorts must Campbell have sold?

Answer:

Set up a costs list (10 items → £425)

Helmets	Shorts	Total
1	9	£375
2	8	£400
3	7	£425