

Mathematical Problem Solving

GCSE example

Solution to example 17

5	7	6	?
?			10
9	2	4	?

In this rectangle, the numbers along each edge add up to the same total.

The missing numbers are all positive whole numbers.

What are the missing numbers?

What is the total along each edge?

Marking the unknown spaces with a , b and c .

5	7	6	a
c			10
9	2	4	b

The total along the top edge is $5 + 7 + 6 + a = 18 + a$

The total along the right hand edge is $10 + a + b$

These two totals are the same so $18 + a = 10 + a + b \Rightarrow 18 = 10 + b$ so $b = 8$

The bottom edge can now be used to get the total along each edge. Total = $9 + 2 + 4 + 8 = 23$

This means that $a = 5$ and $c = 23 - 5 - 9 = 9$