# Mathematical Problem Solving
## GCSE example

## Solution to example 21

Maria has five coins in her pocket.

If she picks **four** of the coins

the most she could pick is £4.50

the least she could pick is £2.70

How much money does she have altogether?

The key to solving this problem is that they realise that the greatest amount will result from the four coins of greatest value and the least amount from the four coins of least value.

Numbering the coins $1, 2, 3, 4, 5$

Coins $2, 3, 4, 5$ add up to £4.50

Coins $1, 2, 3, 4$ add up to £2.70

Subtracting the second total from the first will eliminate the values of coins $2, 3$ and $4$.

£4.50 $-$ £2.70 $=$ £1.80

This is the difference between the values of coin $1$ and coin $5$.

The only two UK coins that have this difference are the £2 coin and the 20p coin.

The total amount is therefore £4.70