## Coffee Shop Maths Investigation

Tea at Twinkl

coffee 80p

cake $£ 1.20$

muffin 90p

hot chocolate £1

cookie 50p

Four people visit Tea at Twinkl to buy a drink and item of food each.

1. What is the most and least they could spend?

Most: $\qquad$
Least: $\qquad$
2. They buy the same drink and the same item of food for each person for exactly $£ 8$. Which items did they buy?
3. The four people find they have lost $£ 1$ so only have $£ 7$ altogether. They want to buy the same drink and the same item of food for each person for exactly $£ 7$.
Which items could they buy?

## Coffee Shop Maths Investigation

Tea at Twinkl

coffee $£ 1.20$

cake $£ 1.75$

muffin $£ 1.10$

hot chocolate $£ 1.45$

cookie 75p

Four people visit Tea at Twinkl to buy a drink and item of food each.

1. What is the most and least they could spend?

Most: $\qquad$
Least: $\qquad$
2. The four people have $£ 10$ altogether.
a. What is the most they can spend if they buy the same drink and the same item of food each?
$\qquad$
b. Each person has to buy one drink and one item of food, but can buy anything from the menu. What could they buy to get the least amount of change from $£ 10$ ?

## Coffee Shop Maths Investigation

I can calculate with money.

Tea at Twinkl


Tea at Twinkl sells coffee, tea and hot chocolate, cake, muffins and cookies.
The table below shows the making cost of each item. A total profit of $£ 150$ needs to be made each day to pay for staff and other costs. Estimate the number of each drink or food item sold each day and calculate the prices that need to be charged.

| Item | Cost <br> to make | Price | Profit <br> per sale | Number sold | Total profit <br> per item |
| :--- | :---: | :---: | :---: | :--- | :---: |
| Coffee | $25 p$ |  |  |  |  |
| Tea | $20 p$ |  |  |  |  |
| Hot Chocolate | $50 p$ |  |  |  |  |
| Cake | $60 p$ |  |  |  |  |
| Muffin | $35 p$ |  |  |  |  |
| Cookie | $30 p$ |  |  | Total |  |
|  |  |  |  |  |  |

## Challenge

Create a spreadsheet which will calculate the profit for different prices and numbers sold.

## Coffee Shop Maths Investigation Answers

I can calculate with money.
Tea at Twinkl

cake $£ 1.20$

muffin 90p

hot chocolate $£ 1$

cookie 50p

Four people visit Tea at Twinkl to buy a drink and item of food each.
What is the most and least they could spend?
Most: £8.80
Least: £4.20

1. They buy the same drink and the same item of food for each person for exactly $£ 8$. Which items did they buy? Coffee and cake.
2. The four people find they have lost $£ 1$ so only have $£ 7$ altogether. They want to buy the same drink and the same item of food for each person for exactly $£ 7$.
Which items could they buy?
Tea and cake.

## Coffee Shop Maths Investigation Answers

I can calculate with money.
Tea at Twinkl

coffee $£ 1.20$

cake $£ 1.75$

muffin $£ 1.10$

hot chocolate $£ 1.45$

cookie 75p

Four people visit Tea at Twinkl to buy a drink and item of food each.

1. What is the most and least they could spend?

Most: £12.80
Least: £6.80
2. The four people have $£ 10$ altogether.
a. What is the most they can spend if they buy the same drink and the same item of food each?

## £9.20 coffee and muffin.

b. Each person has to buy one drink and one item of food, but can buy anything from the menu. What could they buy to get the least amount of change from $£ 10$ ?
$\mathbf{2}$ coffees, $\mathbf{2}$ hot chocolates, 1 cake, $\mathbf{2}$ muffins, 1 cookie.

