

The background of the image shows two white coffee cups with latte art on a wooden table. A dark, semi-transparent rectangular overlay is positioned in the center, containing the text. The lighting is warm and focused on the coffee.

# Introducing Problem Solving

*Problem Solving Solved*

# *Introducing problem solving: Money*

“ **Problem solving is knowing what to do....  
... when you don't know what to do.** ”

- **25% of the marks on Foundation**
- **30% of the marks on Higher**

# Introducing problem solving: Money

 **Understand the question**

 **Ask your own questions**

 **Connect ideas**

 **Change direction**

*Problem Solving Solved*

## Understand the question

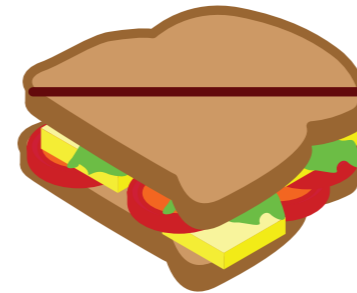
Here are the prices at a café.



Tea £1.80



Coffee £2.15



Sandwich £3.15



**1** Write some questions to go with the information. Just write the questions, don't answer them yet.

## Understand the question

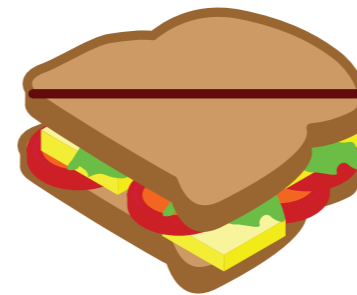
Here are the prices at a café.



Tea £1.80



Coffee £2.15



Sandwich £3.15

How much does it cost to buy one of each item?

How much change is there from £5 when buying a sandwich?

How much do 3 coffees cost?

And many more...

**1** Write some questions to go with the information.  
Just write the questions, don't answer them yet.

**?** Ask your own questions

**2** Alan buys 3 teas.  
Work out the cost.

	1	8	0
×			3

← Tea £1.80



p

**?** Ask your own questions

**2** Alan buys 3 teas.  
Work out the cost.

$$\begin{array}{r} \times \\ \begin{array}{|c|c|c|} \hline 1 & 8 & 0 \\ \hline & & 3 \\ \hline \hline 5 & 4 & 0 \\ \hline \hline \end{array} \\ \begin{array}{c} 2 \\ p \end{array} \end{array}$$

← Tea £1.80



**?** Ask your own questions

**3** Alan buys 2 coffees.  
Work out the cost.

	2	1	5
×			2

← Coffee £2.15



p



**?** Ask your own questions

**3** Alan buys 2 coffees.  
Work out the cost.

	2	1	5
×			2
	4	3	0
		1	

p

← Coffee £2.15

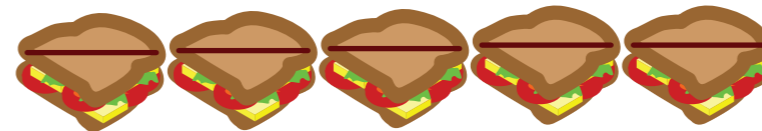


**?** Ask your own questions

**4** Alan buys 5 sandwiches.  
Work out the cost.

	3	1	5
×			5

← Sandwich £3.15



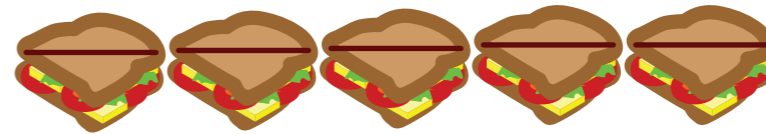
p

**?** Ask your own questions

**4** Alan buys 5 sandwiches.  
Work out the cost.

	3	1	5	
×			5	
1	5	7	5	p
		2		

← Sandwich £3.15





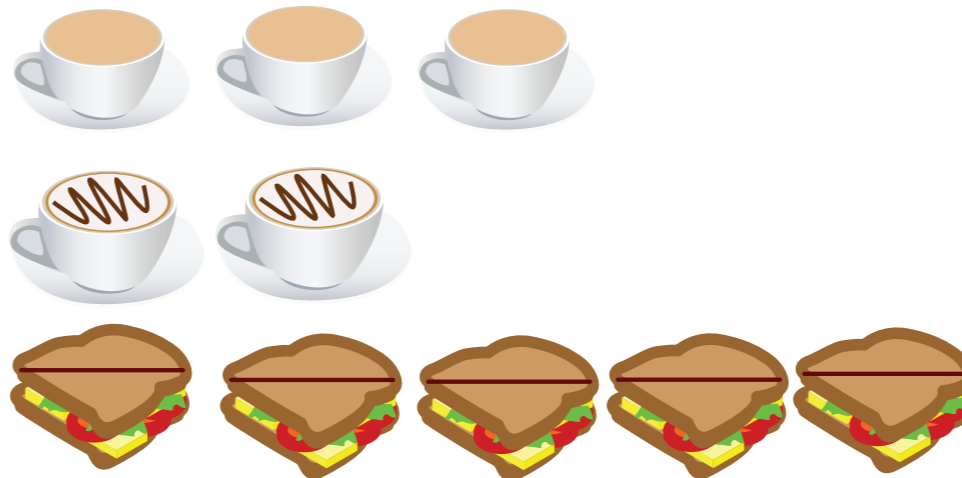
**Connect ideas**

**5**

**Work out the total cost.**

+


p





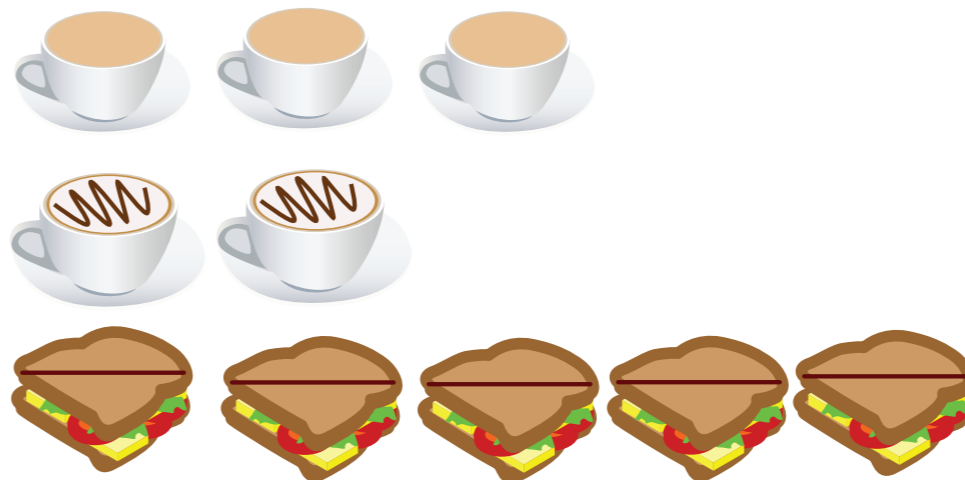
Connect ideas

5

Work out the total cost.

$$\begin{array}{r} \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ + \\ \hline 2 \\ 1 \\ \hline 2 \end{array} \begin{array}{r} \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \hline 5 \\ 5 \\ \hline 5 \end{array} \begin{array}{r} \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \hline 4 \\ 7 \\ \hline 4 \end{array} \begin{array}{r} \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \hline 0 \\ 0 \\ \hline 5 \end{array} \begin{array}{r} \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \phantom{+} \\ \hline \phantom{0} \\ \phantom{0} \\ \hline \text{p} \end{array}$$

1      1





**Connect ideas**

- 6** Alan shares the price equally between 5 people.  
How much does each person pay?



5	2	5	4	5

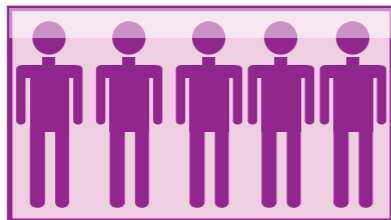
p





## Connect ideas

- 6** Alan shares the price equally between 5 people.  
How much does each person pay?



		5	0	9	
5	2	<sup>2</sup> 5	4	<sup>4</sup> 5	p

**£5.09 each**

# Introducing problem solving: Money



**Change direction**

**If things don't work out...**



**Don't do the same thing over and over...  
... expecting to get different results.**

*Einstein*



- **Learn from what you have done**
- **Try something different**



# Introducing problem solving: money & buying things 1



Resource ©Toticity Limited

1 Here is some information.

		
<b>Tea £1.80</b>	<b>Coffee £2.15</b>	<b>Sandwich £3.15</b>

Write some questions to go with the information.  
Just write some questions, don't answer them yet.

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2 Alan buys 3 teas. Calculate the cost of 3 teas.

1	8	0	← Tea £1.80
		3	
x			
			p



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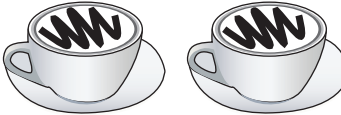
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3 Alan buys 2 coffees. Calculate the cost of 2 coffees.

2	1	5	← Coffee £2.15
		2	
x			
			p



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# Introducing problem solving: money & buying things 2



Resource ©Toticity Limited

4 Alan buys 5 sandwiches. Calculate the cost of 5 sandwiches.

	3	1	5
x			5

← Sandwich £3.15

p

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5 Work out the total cost.

+			

p

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6 Alan shares the price equally between 5 people.  
How much does each person pay?

5	2	5	4

p

# Introducing problem solving: money & buying things answers



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## 1 Example questions:

How much does it cost to buy one of each item?

How much change is there from £5 when buying a sandwich?

How much do 3 coffees cost?

And many more...

2

1	8	0
		3
x		
5	4	0

p so £5.40

2

3

2	1	5
		2
x		
4	3	0

p so £4.30

1

4

	3	1	5
			5
x			
1	5	7	5

p so £15.75

2

5

	5	4	0
	4	3	0
1	5	7	5
+			
2	5	4	5

p so £25.45

1 1

6

		5	0	9
5	2	25	4	45

p so £25.45