

# Homework/Extension

## Step 5: Multi-Step Problems

### National Curriculum Objectives:

Mathematics Year 5: (5C4) [Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why](#)

### Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

**Developing** Use addition and subtraction to find missing numbers in a two-step function. Numbers up to 3 digits represented using place value counters with limited exchanging.

**Expected** Use addition and subtraction to find missing numbers in a two-step function. Numbers up to 4 digits including exchanging with use of place value counters.

**Greater Depth** Use addition and subtraction to find missing numbers at any point in a two-step function. Numbers up to 4 digits used in context including exchanging.

Questions 2, 5 and 8 (Varied Fluency)

**Developing** Calculate the amount subtracted and the total within a word problem. Numbers up to 3 digits used in context represented using place value counters with limited exchanging.

**Expected** Calculate the amounts added and subtracted within a word problem. Numbers up to 4 digits used in context.

**Greater Depth** Calculate the amounts added and subtracted within a word problem. Numbers up to 4 digits retrieved from data used within a context.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

**Developing** Explain if a statement is correct involving addition and subtraction in a multi-step problem. Numbers up to 3 digits represented using Base 10 with limited exchanging.

**Expected** Explain if a statement is correct involving addition and subtraction in a multi-step problem. Numbers up to 4 digits with exchanging.

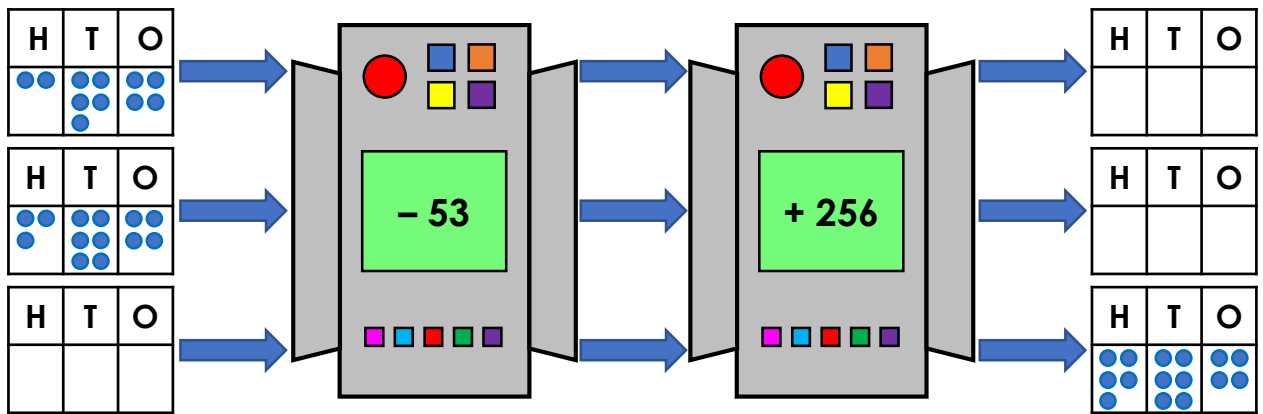
**Greater Depth** Explain if a statement is correct involving addition and subtraction in a multi-step problem. Numbers up to 4 digits retrieved from a graph within a context including exchanging.

More [Year 5 Addition and Subtraction](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# Multi-Step Problems

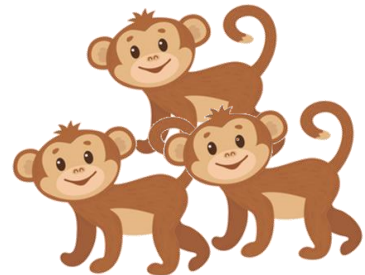
1. Look at the functions on the machines. Work out what is going in and out of the machine and complete the empty place value charts.



VF  
HW/Ext

2. The monkeys in the zoo are given 278 bananas in the morning. Before lunch there are 59 bananas left. They are given another 136 bananas for the afternoon. How many bananas did they eat in the morning? How many bananas did they have for the afternoon?

H	T	O
● ●	● ● ● ●	● ● ● ●
	● ● ● ●	● ● ● ●
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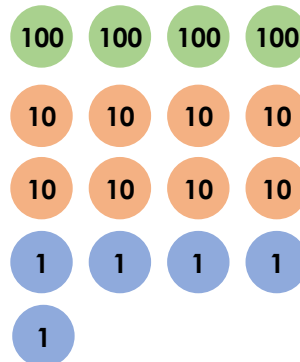
VF  
HW/Ext

3. Lilly makes some cupcakes on Friday, Saturday and Sunday. By the end of the day on Sunday she has made a total of 485 cupcakes.

Her brother Eddie says,



You could have made 154 cupcakes on each of the three days.



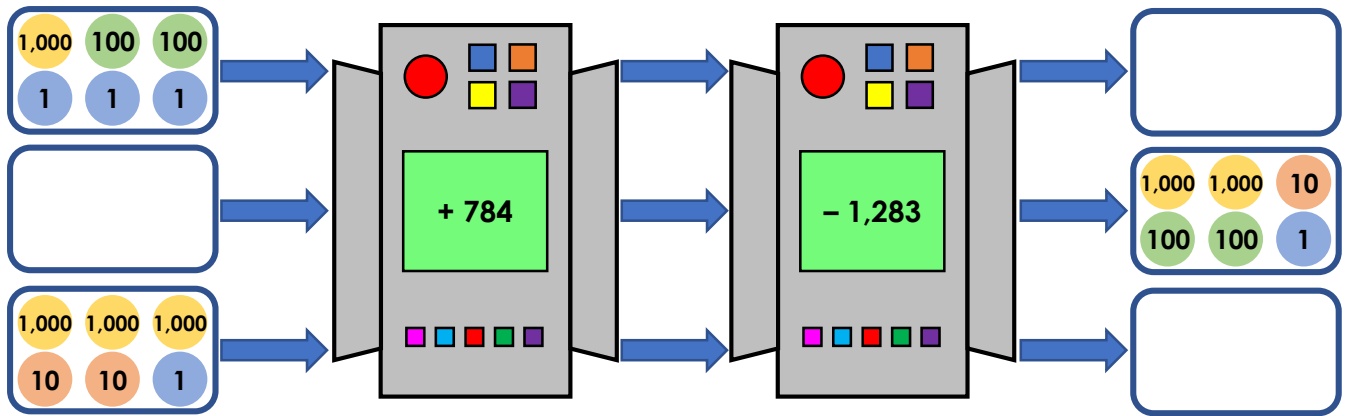
Is Eddie correct? Explain why.



RPS  
HW/Ext

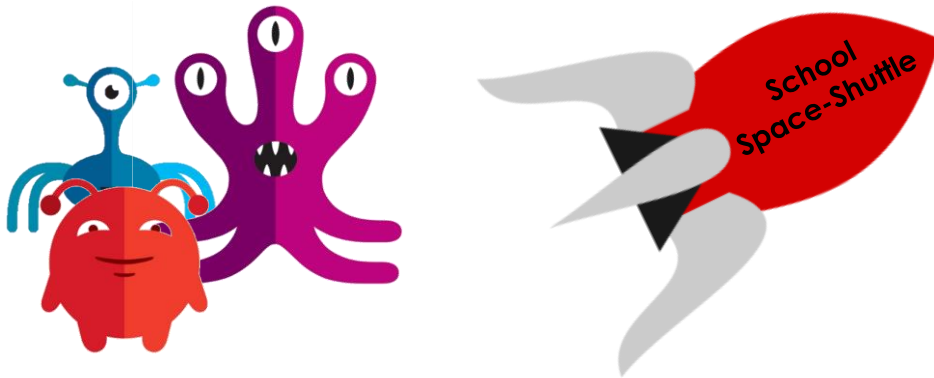
# Multi-Step Problems

4. Look at the functions on the machines. Work out what is going in and out of the machine and find the missing numbers.



VF  
HW/Ext

5. Aliens travel to school in their space-shuttle.  
1,579 aliens are picked up at the first planet.  
After the second planet, there are 2,604 aliens on board.  
They stop at a third planet. When they reach the school, there are 1,649 aliens on board. How many aliens got on or off the space-shuttle at each planet?



VF  
HW/Ext

6. Emma goes out for a walk each day. On Monday she walked 1,679 steps. When she got up on Friday she had already walked 4,985 steps.

Her brother George says,



You could have walked 1,102 steps on Tuesday, Wednesday and Thursday.

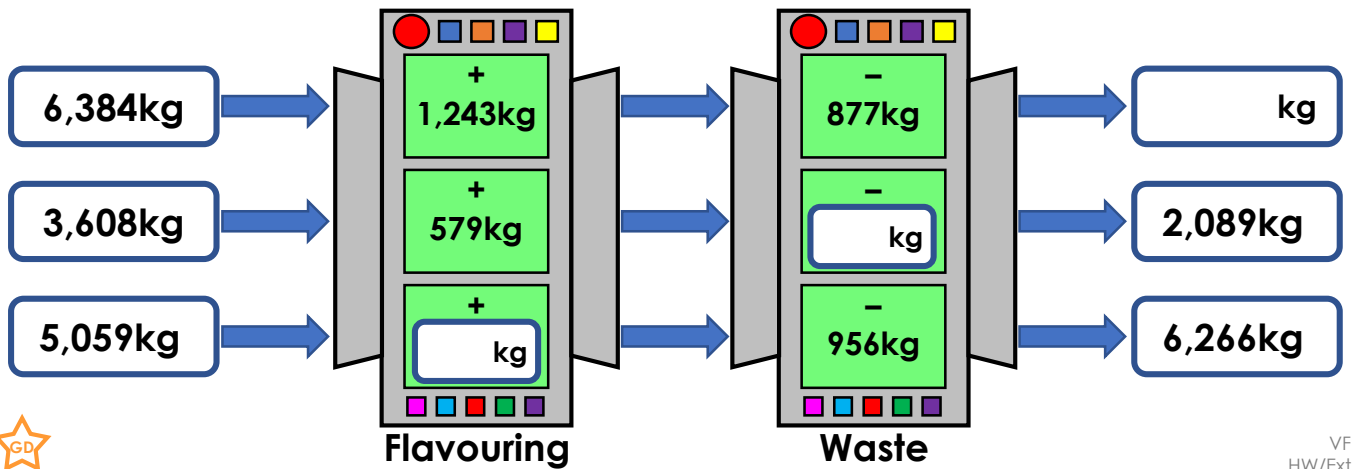
Is George correct? Explain why.



RPS  
HW/Ext

## Multi-Step Problems

7. A juice-making company adds raw materials to their machine. They add flavouring powder and then remove any waste mixture. Work out the missing amounts going into and out of the machine.



VF  
HW/Ext

8. Rebecca and Chloe are going on a 5-day walking challenge. The chart below shows the time they spent travelling and the number of metres they walked. Work out the missing values. What is the difference between the lowest and highest amounts for both time and distance?

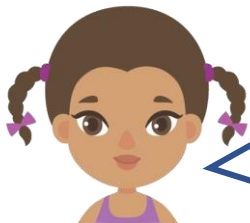
Day	Time (minutes)	Distance (m)
Monday	564	1,458
Tuesday	712	
Wednesday		2,008
Thursday	498	968
Friday	248	1,854
Total	2,669	7,975



VF  
HW/Ext

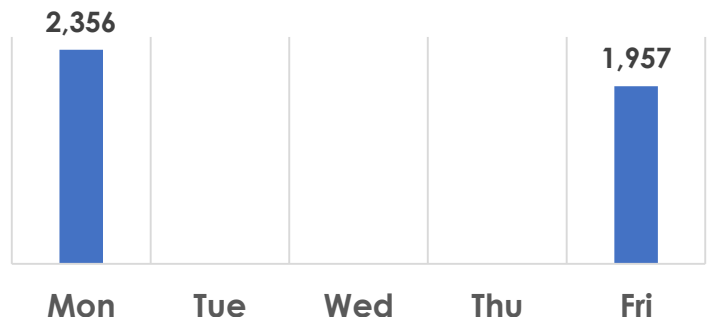
9. The partially completed chart below should show the amount of water Lloyd drank on each day from Monday to Friday. In total, he drank 9,465ml of water.

His sister Lara says,



You could have drunk 1,679ml on Tuesday, Wednesday and Thursday.

Millilitres of Water Drunk each Day



Is Lara correct? Explain why.



RPS  
HW/Ext

## Homework/Extension Multi-Step Problems

### Developing

1. 457; 567; 361
2. 219 bananas were eaten and there were 195 bananas for the afternoon.
3. Eddie is not correct. If Lilly had made 154 cupcakes on each of the three days, she would have made a total of only 462 cupcakes.

### Expected

4. 704; 2,710; 2,522
5. 1,025 aliens got on at the 2<sup>nd</sup> planet. 955 aliens got off at the third planet.
6. George is correct. She has walked 3,306 steps over the three days. Including the 1,679 steps on the first day, the total number of steps is 4,985.

### Greater Depth

7. 6,750kg; 2,098kg of waste; 2,163kg of flavouring
8. Wednesday = 647 minutes; Tuesday = 1,687 metres  
Differences: Time = 464 minutes; Distance = 1,040 metres
9. Lara is not correct. If Lloyd had drunk 1,679ml of water on Tuesday, Wednesday and Thursday, he would only have drunk 9,350ml in total.