Charlie has made a Magic V with five consecutive
numbers:

It is a Magic $V$ because each 'arm' has the same total.


42

1

Alison drew this magic V :
Charlie said "That's really just the same Magic V as mine!" What do you think Charlie meant?

## Can you find all the possible Magic Vs that use the numbers 1 to 5 and are different from Charlie's?

How can you be sure you have found them all?

What happens if you use the numbers from 2 to $\mathbf{6 ? ~ O r}$ from $\mathbf{3}$ to $\mathbf{7 ?}$ Or 4 to 8...?

## Can you describe an efficient strategy to find all Magic Vs for any given set of numbers?

Can you use your strategy to find all the possible Magic Vs that use the numbers 987, 988, 989, 990, 991?

Can you find a Magic V where each arm has a total of 60? Or 1000? Or...? Can you find more than one?
Can you find a Magic V for any arm total?

Charlie and Alison drew some more letters, to see if they could make them magic - that is, using consecutive numbers to make equal arm totals.

Magic N ?


Magic W?


Investigate some of these Magic Letters in the same way that you explored Magic Vs.
What general conclusions can you reach?

