

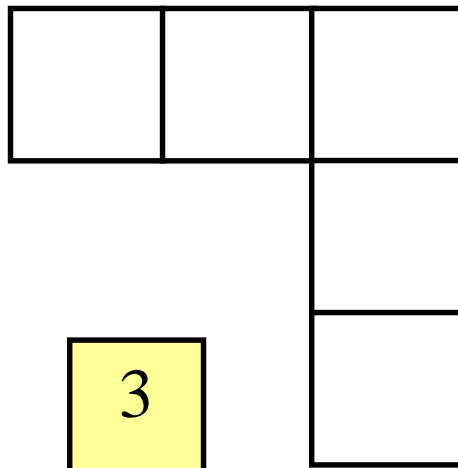


INVESTIGATION



Up and down

2



5

4

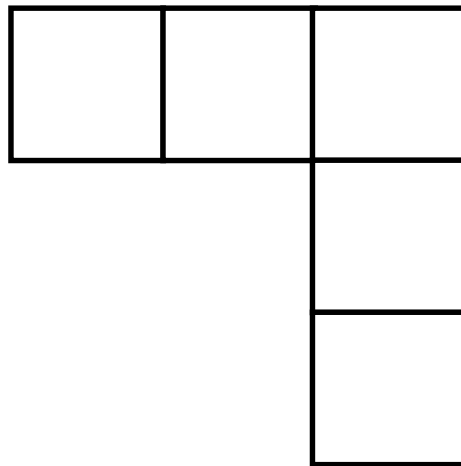
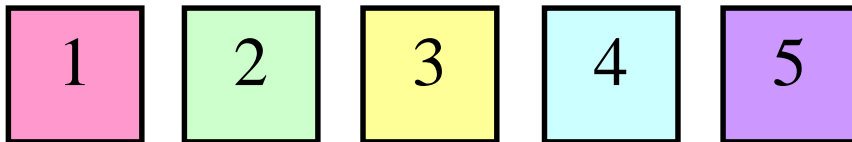
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1

MathSphere

Up and down Investigation

Starter



Can you put the numbers into the boxes so that the row across adds up to the same as the column down?

There is more than one way of doing this so: **INVESTIGATE**

Some Ideas

Work in a methodical way, recording your results carefully as you go.

MAKE SURE THAT YOU HAVE SOLVED THE PROBLEM ONCE.

Look at your answer.

Does this help you find other ways of doing it?

Can you make a rule up about how to do this?

What would happen if you chose a different set of 5 consecutive numbers?

What would happen if you included a zero in your numbers?

What would happen if your numbers were multiples of two eg 2 4 6 8 10?

What would happen if your numbers were not consecutive?

What would happen if you chose a grid which had four numbers across and four numbers down?

Answer Guide

This is a good starter investigation for children who are able to add a set of three small numbers together.

It would be a good idea to have a set of number cards so that children can move them about to find a solution.

Once one solution has been found then it should not be difficult to find another. This is a good investigation for making simple rules

eg "the middle number must go in the corner and be counted both across and down."

As there are a limited number of solutions this is ideal for asking, "what would happen if...." type questions such as

Changing the numbers to a different consecutive set

Changing numbers to multiples of 2, 3 5 or 10

Changing to consecutive odd numbers

Changing to a random set of numbers

Increasing the number of rows and columns

All of these can lead to making rules and statements and checking to see if they are true.