

# Two up

## Problem sheet

What questions would you like to ask? Spend some time exploring the spreadsheet and changing things before you resort to using some of the ideas below.

Remember to make a note of your conjectures and write down explanations of what you find so that you can share your ideas and reasoning with other people later.

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Here are some things you might think about if you cannot think of a question of your own:

- What things could you change?
  - the start number
  - the number of rows in column 1
  - the multiplication table
- What questions could you ask about changing the start number?
  - Can I see a pattern to the end number for different start numbers?
  - What happens when I change the multiplication table?
  - How can I make the end number the same if I keep the start number the same?
- What questions could you ask about changing the end number?
  - How does the end number depend on the start number?
  - How does the end number depend on the times table I use?
  - Can I work out a rule for the end number that takes account of different start numbers and tables?
- Can you work out the end number if someone tells you the start number, the table and the number of rows? Is there a rule that always works?
- Can you work out the start number for any multiplication table, number of rows and end number?
- Are some end numbers impossible under certain conditions?