

Notes for Sum, difference, product

Teaching notes

This activity supports objectives described in the Secondary Mathematics Framework: Statistics Years 7–11. (Given area what could dimensions be, factors, addition/subtraction of positive/negative numbers, factoring quadratics, etc.)

It involves using a spreadsheet package which models sum, product, difference and quotient of two randomly-generated numbers.

Start by opening Sum, difference, product spreadsheet and enabling macros.

Select spreadsheet from tabs (Positive numbers only, positive/negative numbers and one which includes quotients)

Decide which numbers to hide or reveal

Up and down arrows generate new random numbers (currently between 0 and 12 or -2 and 12)

Demonstrate how the software works if it is to be used by pupils in small groups or pairs

Possible questions to prompt pupils to extend thinking:

- What clues did you look for?
- What links have you made?
- Can you explain what you have done so far? What else is there to do?
- Why did you decide to use this method or do it this way?
- Can you think of another method that might have worked?
- Could there be a quicker way of doing this?
- What do you mean by...?
- What did you notice when...?
- Are you beginning to see a pattern or a rule?
- Do you think that this would work with other numbers?

Teaching points

- Make sure you are familiar with the software.
- As a starter activity for less-able pupils reveal the two random numbers for pupils to calculate sum, product and difference
- If only using product, software could support teaching of factors
- As a starter for other pupils reveal sum, product difference and ask for the original numbers
- For Key Stage 4 pupils make links to factorising quadratics
- Link to algebra and simultaneous equations when only two values revealed