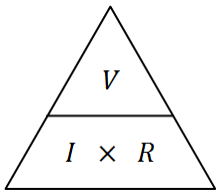


Teacher Activity D: Calculations using formulae

Suppose you needed to explain to a class of students how to do the following calculation:

What current will flow through a resistance of $10\ \Omega$ if a potential difference of $3\ \text{V}$ is applied across it?

The following boxes show possible starting points for doing this calculation.

<p>The formula that defines resistance is:</p> $\text{resistance} = \frac{\text{potential difference}}{\text{current}}$	<p>Some people use a ‘calculation triangle’ to represent such a relationship.</p> 
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- Which of these two ways would you use?
- If you used the formula, how would you go about re-arranging it? Would you explain to students why it is done that way?
- If you used the ‘calculation triangle’, how would you describe what to do? Would you explain to students why this method works?
- In what ways do you think that ‘calculation triangles’ could be helpful or unhelpful?

Further information: *The Language of Mathematics in Science: A Guide to Teachers of 11-16 Science*, Chapter 9 Scientific models and mathematical equations, Sections 9.5-9.10 (pp 93-99)

This activity is part of a series produced by MathsInScience.uk in order to promote engagement with the guidance booklet *The Language of Mathematics in Science: A Guide to Teachers of 11-16 Science*. Note that the activities are intended to stimulate discussion between teachers, and are not intended for student use. MathsInScience.uk is an independent organisation that aims to support the use of mathematics in the secondary science curriculum: see the website www.mathsinscience.uk.