Year 6 | Algebra

Number patterns and step-by-step rules

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Show your thinking using words, working or a labelled drawing. Use the explanations and example first.

What you will practise

• Number patterns and step-by-step rules

• Explain and check an answer with an appropriate representation.

Useful starting skills: Use objects, drawings or a number line to explain a simple idea.

A number pattern follows a rule. Compare successive terms to find how the value changes, and test your rule against more than one pair.

An algorithm is an ordered set of instructions. A repeating instruction creates a sequence; a decision tells you which step to follow or when to stop. State whether the starting value counts as a term.

Worked example

A pattern begins 3, 7, 11. Find the next two numbers.

Each term is 4 greater than the previous term.

11+4=15 and 15+4=19.

Answer: 15, 19

Try it yourself

Name: _____ Date: _____

1. Continue 1, 3/2, 2, 5/2 with two more terms. State the rule.

2. Continue 3/4, 3/2, 9/4, 3 with two more terms. State the rule.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. 3, 7/2; add 1/2 each time

The difference between successive terms is constant. Apply the same difference twice.

2. 15/4, 9/2; add 3/4 each time

The difference between successive terms is constant. Apply the same difference twice.

Curriculum reference: VC2M6A01; VC2M6A03

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