Number patterns and step-by-step rules

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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 6, 9, 12, 15 with two more terms. State the rule.

2. Continue 15, 20, 25, 30 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. 18, 21; add 3 each time

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

2. 35, 40; add 5 each time

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

Curriculum reference: VC2M2A01

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