Year 6 | Number

Prime, composite, square and triangular numbers

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

• Prime, composite, square and triangular numbers

• 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 prime number has exactly two distinct positive factors:1 and itself. A composite number has more than two. The number 1 is neither. Arrays and factor pairs make these definitions visible.

Square numbers can be arranged in equal rows and columns. Triangular numbers are built by adding rows of 1, 2, 3 and so on. A number can have more than one property, so use the defining test for each.

Worked example

Classify 25.

Its positive factors are 1, 5, 25, so it is composite.

It is also 5×5, so it is a square number.

Answer: Composite and square

Try it yourself

Name: _____ Date: _____

1. Classify 17, 21 and 1 as prime, composite or neither.

2. List the first six positive square numbers.

Answers and explanations

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

1. 17 prime; 21 composite; 1 neither

17 has exactly two positive factors; 21 has 1, 3, 7, 21; 1 has only one positive factor.

2. 1, 4, 9, 16, 25, 36

They are 1×1 through 6×6.

Curriculum reference: VC2M6N02

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