

# Individual report for parents

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## What is CAT4?

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Your child has taken the *Cognitive Abilities Test Fourth Edition (CAT4)* which assesses how well a student can think about tasks and solve problems using a range of different questions.

Some tasks involved thinking about shapes and patterns (Non-verbal Reasoning), some with words (Verbal Reasoning) or numbers (Quantitative Reasoning) and, finally, some questions were answered by thinking about shape and space together and imagining a shape being changed and moving (Spatial Ability).

## Why use CAT4?

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- CAT4 is used in many schools across the UK to provide information to teachers, students and parents that, with other information such as results from Key Stage 2 tests, forms the basis for discussion about how best an individual can learn and reach his or her potential in school.
- CAT4 does not require any prior knowledge and you cannot 'learn' how to answer the questions in CAT4. It is therefore a good test because everyone starts at the same place.
- The abilities tested in CAT4, such as spatial ability, may be difficult to demonstrate in the classroom so it is important that teachers know the level of a student's ability in such areas.
- CAT4 contributes to setting targets (for example, levels expected at the end of the next Key Stage or grades at GCSE) and allows an individual's progress to be monitored.
- CAT4 results will help teachers decide about the pace of learning that is right for an individual and whether additional support or challenge is needed.
- CAT4, unlike an English or maths test, is not a test of what the student has learned. It tests how an individual can think in areas that are known to make a difference to learning and achievement.

## Example questions

### Verbal Reasoning Battery – thinking with words

#### Verbal Classification

Three words are presented which are similar in some way or ways. From a selection of five possible answers, the student must identify a fourth word with similar properties.

The answer is snow because rain, fog and sunshine are all types of weather and snow is also a type of weather.

rain                  fog                  sunshine

winter	snow	weather	dark	night
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#### Verbal Analogies

A pair of connected words is presented alongside a single word. From a selection of five possible answers, the student must select a word to complete the second pair in the same way.

The answer is window, because a carpet goes on a floor and a curtain hangs at a window.

carpet → floor : curtain →

window	shade	hang	drapes	cloth
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### Quantitative (or Numerical) Reasoning Battery – thinking with numbers

#### Number Analogies

Two pairs of related numbers are presented. From a selection of five possible answers, the student must select a number to complete a third pair.

The answer is 8. Here 1 add 1 makes 2, but that doesn't work for the second pair because 5 add 1 is 6, not 10. Instead, you have to multiply by 2 to get the second part of each pair, so 4 times 2 is 8.

[ 1 → 2 ]                  [ 5 → 10 ]                  [ 4 → ? ]

5	7	8	9	10
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#### Number Series

A sequence of numbers created by a transformation rule is presented. From a selection of five possible answers, the student must identify the rule and continue the sequence.

The answer is 15. There are two number patterns in this series. The first, third and fifth numbers go down by 1 at a time – 18, 17 then 16. The numbers in between them go up by two at a time – 5, 7 then 9. This means the next number must be 16 minus 1, giving 15.

18 5 17 7 16 9 →


11	12	13	14	15
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### Non-verbal Reasoning Battery – thinking with shapes

#### Figure Classification

Three designs are presented which are similar in some way or ways. From a selection of five possible answers, the student must identify a fourth design with similar properties.

The answer is E because it is the only answer choice that is a striped semi-circle, like the first three figures.

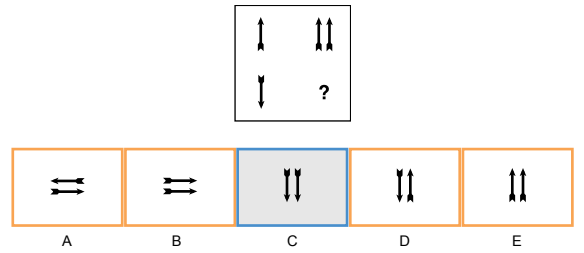


				
A	B	C	D	E

### Figure Matrices

Designs are presented in a grid with one empty square and, from a selection of five possible answers, the student must identify the missing design.

The answer is C because in the top pair 'one arrow up' goes to 'two arrows up', so in the second pair 'one arrow down' must go to 'two arrows down'.

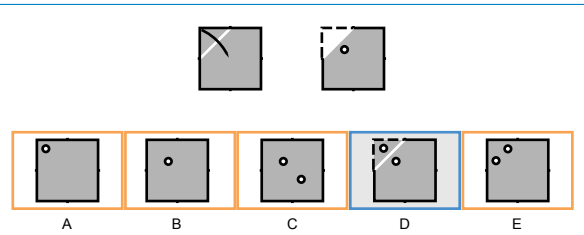


### Spatial Ability Battery – thinking with shape and space

#### Figure Analysis

A series of diagrams shows a square being folded repeatedly, and then punched through with holes. From a selection of five possible answers, the student must identify how the paper will appear when unfolded.

The answer is D. The hole is punched through both layers of paper, so as it is unfolded the holes will be a mirror image of each other, with the crease being the mirror line.



#### Figure Recognition

Several complex designs are presented along with a single target shape. From a selection of five possible answers, the student must identify the target shape within one of the complex designs.

The answer is E. It isn't A because that shows the target flipped over. It isn't B or C because they have shapes that are the wrong size.

