



## Trent College & The Elms Cognitive Abilities Test - Overview

Children applying to join Years 5 to 10 will take a Cognitive Abilities Test, often known as a CAT test, which identifies how a child thinks in four areas that are known to make a difference to learning.

This Cognitive Abilities Test is done on a computer, and all the questions are multiple choice. There are eight parts in total, each with an individual time limit of between 8 and 10 minutes. The timer appears on screen for each individual candidate, and only starts to count down when he or she clicks 'start'. The tests are generously timed - most children reach the final questions in each part, and many have time to go back and check their answers. The whole test takes around 1½ to 2 hours to complete, depending on the duration of breaks.

Each part of the assessment includes introductory information with practice examples, which will familiarise the candidate with the style and format of the questions. These introductory sections are not timed and may be repeated if needed to ensure understanding.

This part of the assessment does not allow for additional time to be given to children with special educational needs. However, children may be given a headset so that the written on-screen introductory information can be heard aurally.

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**Verbal Reasoning:** the ability to express ideas and reason through words is essential to subjects with a high language content, and the most obvious skill picked up by traditional assessment.

### Verbal Classification

<p>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.</p> <p>The answer is snow because rain, fog and sunshine are all types of weather and snow is also a type of weather.</p>	<p>rain      fog      sunshine</p> <p>winter   snow   weather   dark   night</p>
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### Verbal Analogies

<p>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.</p> <p>The answer is window, because a carpet goes on a floor and a curtain hangs at a window.</p>	<p>carpet → floor : curtain →</p> <p>window   shade   hang   drapes   cloth</p>
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**Non-verbal Reasoning:** problem-solving using pictures and diagrams; skills which are important in a wide range of school subjects, including maths and science-based subjects.

**Figure Classification**

<p>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.</p> <p>The answer is E because it is the only answer choice that is a striped semi-circle, like the first three figures.</p>	
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**Figure Matrices**

<p>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.</p> <p>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'.</p>	
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**Spatial Reasoning:** the capacity to think and draw conclusions in three dimensions, needed for many STEM subjects, but not easily measured by other datasets.

**Figure Analysis**

<p>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.</p> <p>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.</p>	
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**Figure Recognition**

<p>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.</p> <p>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.</p>	
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**Quantitative Reasoning:** the ability to use numerical skills to solve problems, applicable well beyond mathematics.

### 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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### English Paper

In addition to the Cognitive Abilities Test, children applying to join Trent College will also take an English paper so that we can assess their written prose. This is a chance for students to differentiate themselves and their thinking. They can show us both their English skills - wide range of vocabulary, accurate use of spelling, punctuation and grammar - and their creativity – imaginative ideas, how they think and their interests.

For entry to Year 7, the English paper asks children to write an essay, picking one title from a selection provided on the day. For entry to Year 8, 9 & 10, children will answer some comprehension questions, as well as writing an essay.

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### Contacts

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