

IBT Reasoning Framework

In **IBT Reasoning**, the skills assessed require students to think critically, make logical deductions, identify connections and spot patterns. The questions in the test do not require any prior knowledge from any particular content area. Instead, students must demonstrate their ability to think outside the box and use their higher-order thinking skills to solve simple, multi-step and non-routine problems. The content of these test papers is based on questions that have been successfully used to identify high-achieving students for scholarship placements. However, students who do not perform so well on “traditional” academic tests may excel on the general capabilities being assessed in IBT Reasoning.

The IBT Reasoning test comprises 5 different groups of skills known as strands. The five strands are:

- Verbal Reasoning
- Numerical Reasoning
- Abstract Reasoning
- Spatial Reasoning
- Kinetic Reasoning

Verbal reasoning is the ability to understand how words connect to each other and how words within a sentence affect meaning. Verbal reasoning questions require students to recognise synonyms and antonyms, understand the hierarchy of words, identify analogies between different words, rearrange words to form a sentence, and understand the nuances of similar words.

Numerical reasoning is the ability to use numbers to solve a variety of multi-step problems. Numerical reasoning questions require students to recognise numerical patterns and sequences, categorise objects to match numerical quotas, link input and output from number machines, and apply rules to arithmetic puzzles.

Abstract Reasoning is the ability to see patterns and logic in pictures and diagrams. Abstract reasoning questions require students to complete visual patterns that follow simple rules, deduce which rules have been applied to change the states of images, and identify the next steps in visual sequences.

Spatial reasoning is the ability to visualise the transformations of objects on a page. Spatial reasoning questions require students to recognise where shapes appear in complex images, identify how shapes have been manipulated through reflection and rotation, and rearrange pieces of an image to form a complete picture.

Kinetic reasoning is the ability to anticipate the results from the movement of objects in practical situations. Kinetic reasoning questions require students to recognise the effects of turning gears, pulling levers and manipulating pulleys. They require students to understand the flow of water and electricity in simple circuits, and the position of objects on a grid after a series of commands.

The number of items on each test form is as follows.

Test Level	Verbal	Numerical	Abstract	Spatial	Kinetic	Total
3-6	8	8	8	8	8	40
7-10	9	9	9	9	9	45