

Technical Test Battery
STANDARD REPORT

Technical Reasoning Overview

The Technical Test Battery (TTB2) measures the core skills that are required for selecting and assessing staff for engineering apprenticeships, craft apprenticeships or technical training. It comprises three separate tests, each designed to assess a different area of technical ability. These areas are the ability to reason with mechanical concepts, the ability to manipulate three dimensional spatial relationships and the ability to quickly and accurately find a path through a complex two dimensional maze.

Research has amply demonstrated that these technical abilities are not accounted for by 'general intelligence' but are specific, measurable, abilities in their own right. What is also true, though, is that general reasoning abilities should also be taken into account when considering technical ability. Verbal, numerical and abstract reasoning skills are highly important in most technical occupations and should therefore be assessed alongside technical abilities. Thus it is recommended that a test of general reasoning ability should be administered along with the Technical Test Battery.

Mechanical Reasoning

The Mechanical Reasoning Test measures a broad ability to understand mechanical principles. Items have been selected to represent physical principles from a wide range of areas, including optics, electrics, fluids and mechanics. The Mechanical Reasoning Test has been developed to assess craft and technician apprentices who require a practical understanding of mechanical principles in action. The following comments are based on a comparison of Sam Sample's performance on the Mechanical Reasoning Test with members of the Process Workers normative group.

Sam Sample's score on the Mechanical Reasoning Test is exceptionally poor when compared to the normative group. This result may either be accounted for by random responding on the part of Sam Sample or reflects a total lack of understanding of the most simple principles of Physics and no grasp of mechanical concepts. As a consequence, he is likely to have extreme difficulty in applying basic mechanical principles in a work setting.



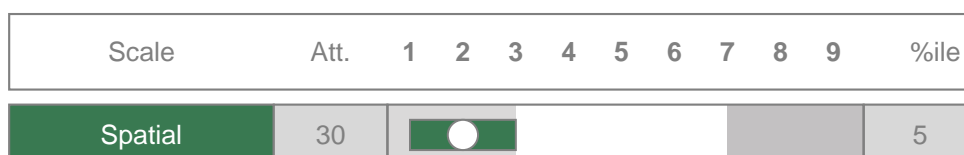
Norms Used:

Mechanical = 161 Process Workers

Spatial Reasoning

The Spatial Reasoning Test (SRT2) measures the ability to manipulate, and reason about, shapes and spatial relationships. The SRT2 assesses how well a person can visualise solid objects from looking at their 2-dimensional plans. The Spatial Reasoning Test, therefore, provides an indication of a person's ability to visualise the shape and surfaces of a finished object before it is constructed. Spatial reasoning ability is an important factor in a number of technical occupations, e.g. mechanical engineering, design, architecture etc. The following comments are based on a comparison of Sam Sample's performance on the Spatial Reasoning Test with members of the Process Workers normative group.

Sam Sample's score on the Spatial Reasoning Test is particularly weak when compared to the normative group. This result suggests an extremely limited understanding of the most basic spatial relationships. As a consequence, he is likely to have extreme difficulty in understanding basic spatial relationships in a work setting.



Norm Used:

Spatial = 102 Process Workers

Visual Acuity

The Visual Acuity Test measures the aptitude for performing tasks which require a great deal of visual precision. The Visual Acuity Test requires the person being tested to trace a path through a number of highly complex mazes in a short period of time. Many of the new technology industries require that workers should be able to work quickly and accurately on tasks which need a high degree of visual precision. Visual acuity is likely to be an important factor in a number of technical occupations, e.g. electrical engineering, mechanical and machine shop apprentices, electrical fault diagnosis, engineering drafting etc. The following comments are based on a comparison of Sam Sample's performance on the Visual Acuity Test with members of the Apprentices normative group.

Sam Sample's score on the Visual Acuity Test shows that he has performed at a slightly lower than average level when compared to the normative group. While he should be able to perform tasks which require a degree of visual precision these may take him a little longer than some.

Scale	Att.	1	2	3	4	5	6	7	8	9	%ile
Visual	15				●						28

Norm Used:

Visual Acuity = 93 Apprentices

Classic Profile

Scale	Att.	1	2	3	4	5	6	7	8	9	%ile
Mechanical	45	●									2
Spatial	30		●								5
Visual	15				●						28

Norms Used:

Mechanical = 161 Process Workers

Spatial = 102 Process Workers

Visual Acuity = 93 Apprentices