PSYTECH INTERNATIONAL

Sam Sample

Graduate Reasoning Test

STANDARD REPORT

Graduate Reasoning Overview

The Graduate Reasoning Test (GRT1) assesses the ability to reason using words, numbers and abstract concepts. It has been specifically designed to discriminate between candidates of above average ability, whose aptitude is being assessed for graduate level employment or higher level training. Reasoning tests in the format of the GRT1 have consistently been found to be the best single predictor of job performance and trainability in roles that require a high level of general mental ability. Combining reasoning test scores with the results from personality tests can further improve the prediction of job performance, as can the use of job sample tests and structured interviews. In roles where experience and acquired knowledge are central to effective performance, it may be particularly appropriate to combine information obtained from reasoning tests with that obtained from these latter sources.

The GRT1 assess the candidate's capacity (a composite of speed and accuracy) to perceive logical patterns and relationships in new material he has not previously encountered, and deduce the logical consequences of these (i.e. logical deductive reasoning). This incorporates the ability to: learn and understand complex new material; use logic to develop arguments that are rational and well reasoned; deduce the logical consequences of a given set of rules, assumptions or relationships.

The GRT1 assesses serial deductive reasoning, rather than holistic deductive reasoning; namely the ability to understand the logical relationships that govern patterns that change along one dimension, rather than the ability to understand logical patterns that develop simultaneously over a number of independent dimensions. As such, the abilities the GRT1 assesses (verbal, numerical and abstract serial deductive reasoning) are most directly relevant to roles that require the candidate to make a series of rational decisions that follow sequentially, one after another. While being relevant to all jobs that require a high level of mental acuity, the abilities the GRT1 assesses are slightly less directly relevant to roles that might require the candidate to accurately perceive and understand logical patterns holistically (i.e. to understand patterns that change simultaneously over a number of different dimensions), and to think strategically, with these latter skills being more directly assessed by matrix reasoning tests such as the ART.

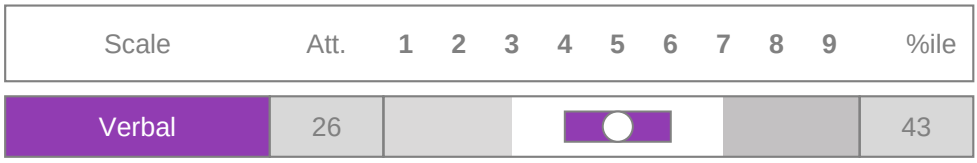
The additional diagnostic (raw) scores, which are provided after the profile chart for each of the Verbal, Numerical and Abstract Tests, enable assessors to establish the respondent's test taking style. These provide additional information which allows assessors to determine the trade-off the candidate has made between speed (Percentage Items Attempted) and accuracy when responding to the GRT2 items. Assessors should be mindful of the need to interpret these raw scores in the context of the candidate's scaled (stanine or percentile) score on each subtest, as both accuracy and speed will increase for higher scorers.

Verbal Reasoning

The Verbal Reasoning test assesses a person's ability to use words in a logical way. Consisting of items which involve an understanding of vocabulary, class membership and the relationships between words, this test measures the ability to perceive and understand concepts and ideas expressed verbally. While this test is a measure of reasoning ability rather than educational achievement, it is nonetheless generally recognised that verbal reasoning test scores are sensitive to educational factors.

Sam Sample's performance on the Verbal Reasoning Test indicates that he has an 'average' level of verbal reasoning ability compared to the chosen reference group. This suggests that he is likely to be as able as most graduate calibre staff to understand complex verbal concepts, to perceive the relationships between these and deduce their logical consequences. While he has demonstrated a reasonable ability to use words in a fairly logical and rational way, it might nonetheless take him a little longer than it may take the highest calibre graduates to fully appreciate particularly difficult concepts and very subtle shades of meaning.

Sam Sample's performance on the Verbal Reasoning Test suggests that he is likely to have a relatively good command of language. While he would be expected to be as able as most graduate level staff to understand new ideas, and explain them coherently to others, he may not always fully appreciate the logic underlying the most complex arguments. He should be able to learn reasonably complex verbal material without undue difficulty, although it may take him a little longer to do so that it might take the highest calibre graduates. He should be able to benefit from training and development programmes that require a reasonably high level of verbal ability, and which require participants to learn relatively complex verbal material.



Norms Used:

Verbal = 1202 Graduate/Managerial

Additional Diagnostic Scores:

Scale	Percentage* Items Correct	Percentage* Items Attempted	Percentage* Accuracy
Verbal	51.4%	74.3%	69.2%

* Raw (unscaled) percentages

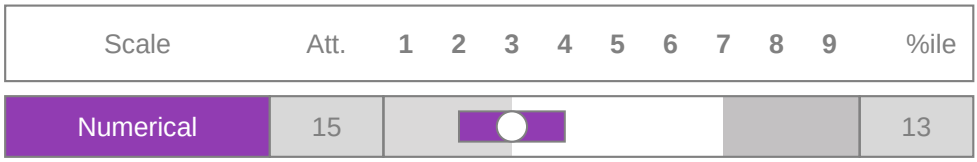
Percentage Items Correct = Number of Correct Responses / Total Number of Items
Percentage Items Attempted = Number of Items Attempted / Total Number of Items
Percentage Accuracy = Number of Correct Responses / Number of Items Attempted

Numerical Reasoning

The Numerical Reasoning Test assesses a person's ability to use numbers in a logical and rational way. The test consists of items which assess the candidate's understanding of number series, numerical transformations, the relationships between numbers and their ability to perform numerical computations.

Sam Sample's performance on the Numerical Reasoning Test indicates that he has a 'well below average' level of numerical reasoning ability when compared to the chosen reference group. This suggests that he is likely to experience more difficulty than most graduate calibre staff in perceiving the logical patterns and relationships between numbers, in understanding the rules that govern these patterns and in deducing the logical consequences of these rules.

Sam Sample is unlikely to be as proficient working with numbers as most graduate calibre staff and it is likely to take him rather longer than the typical person of graduate level ability to understand numerical concepts. He would be expected likely to have some difficulty appreciating the logic underpinning the more complex numerical problems, and may struggle a little to understand difficult numerical/mathematical ideas. He is likely to require focused, well structured training in order to acquire new numerical skills, and would be expected to experience difficulty fully appreciating the fundamental mathematical principles which underlie such skills.



Norm Used:

Numerical = 1202 Graduate/Managerial

Additional Diagnostic Scores:

Scale	Percentage* Items Correct	Percentage* Items Attempted	Percentage* Accuracy
Numerical	32%	60%	53.3%

* Raw (unscaled) percentages

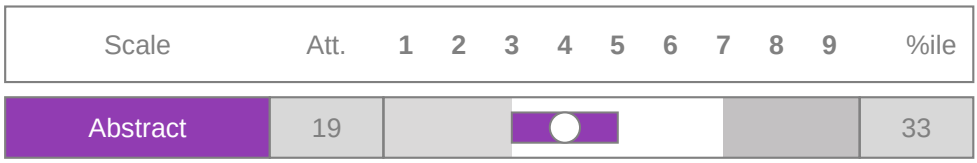
Percentage Items Correct = Number of Correct Responses / Total Number of Items
Percentage Items Attempted = Number of Items Attempted / Total Number of Items
Percentage Accuracy = Number of Correct Responses / Number of Items Attempted

Abstract Reasoning

The Abstract Reasoning Test assesses the ability to understand complex concepts and assimilate new information outside of previous experience. The test consists of items which require the recognition of patterns and similarities between shapes and figures. As a measure of reasoning it is independent of educational attainment and can be used to provide an indication of intellectual potential. Assessing the ability to quickly understand and assimilate new information it is likely to predict how responsive to training the person will be.

Sam Sample's score on the Abstract Reasoning Test indicates that, with respect to the chosen reference group, he has a 'slightly below average' level of fluid or 'natural' (i.e. untutored) reasoning ability. This suggests that while he has a reasonable ability to correctly identify logical patterns and relationships between novel material he has never encountered before, he is nonetheless likely to experience a little more difficulty doing so than would most of the highest calibre graduate level staff. While he should be able to use pure logic (i.e. without calling upon other knowledge/information such as his vocabulary, knowledge of mathematical operations, etc.) to deduce the consequences of such patterns, he is likely to experience a little difficulty correctly deducing the logical consequences of the most complex abstract patterns and relationships.

While Sam Sample would be expected to be able to learn reasonably complicated material without undue difficulty, it may take him slightly longer to do so than it would take many graduate level staff. While he should be able to benefit from training programmes that require an ability to learn relatively abstract material and understand fairly complex logical relationships, he would be expected to experience a little difficulty fully grasping the most complex concepts.



Norm Used:

Abstract = 1202 Graduate/Managerial

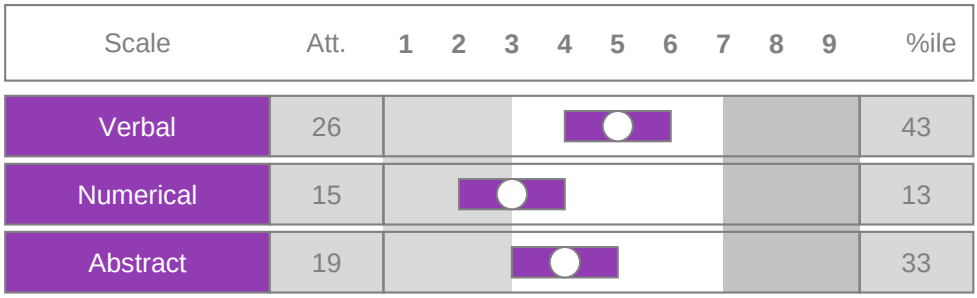
Additional Diagnostic Scores:

Scale	Percentage* Items Correct	Percentage* Items Attempted	Percentage* Accuracy
Abstract	52%	76%	68.4%

* Raw (unscaled) percentages

Percentage Items Correct = Number of Correct Responses / Total Number of Items
Percentage Items Attempted = Number of Items Attempted / Total Number of Items
Percentage Accuracy = Number of Correct Responses / Number of Items Attempted

Classic Profile



Norms Used:

Verbal = 1202 Graduate/Managerial
Numerical = 1202 Graduate/Managerial
Abstract = 1202 Graduate/Managerial

General Mental Ability

General Mental Ability – often termed 'g' – is defined as a person's capacity to: understand logic; comprehend and learn complex new material; think abstractly; solve problems; plan and respond to the environment in an adaptive, rational and flexible manner. It is termed General Mental Ability because it assesses the person's mental capacity across a wide range of different intellectual functions and modalities (i.e. it is not specific to that person's verbal, abstract or numerical reasoning ability, etc.). It is a composite of the speed and accuracy with which the person performs mental tasks, and can therefore be viewed as a measure of a person's 'mental power'.

Crystallised Intelligence – often termed 'Gc' – is defined as a person's capacity to accumulate knowledge and intellectual skills, and learn from experience. It involves acquiring new ideas, information and mental skills, and using these to understand the environment and respond to it in a logical and rational way. It is a function of the speed and accuracy with which the person can perform such mental tasks and use acquired knowledge and competencies in an adaptive manner.

Fluid Intelligence – often termed 'Gf' – is defined as a person's capacity to create meaning out of confusion. It involves the ability to: solve novel problems in a rational way, perceive patterns and relationships in new material and deduce the logical consequences of such patterns. It is a function of the speed and accuracy with which the person performs such mental tasks, with this ability being used whenever a person is required to respond to a novel intellectual task or problem.