Assessing Students with Disabilities: Guidelines on adapting the Profiling for Success assessments for use with students with accessibility needs

produced by
PROFILING FOR SUCCESS
ASSESSMENTS FOR USE IN
HIGHER EDUCATION

These materials and guidance have been developed to support the use of the
Profiling for Success assessments with students who have disabilities that may
prevent them accessing the online assessments.

These materials may only be used by licensed users of Profiling for Success. By
using this material you are agreeing that copies and adaptations will only be made
for students with accessibility needs that cannot be met through the Profiling for
Success online assessment system. These materials are not for general use as an
alternative to the online assessments.

Published by Team Focus Limited,
Heritage House, 13 Bridge Street,
Maidenhead, Berkshire, SL6 8LR, UK.
Printed in Great Britain.
This guide has been compiled using information from a number of sources including current UK legislation, guidance from organisations promoting the rights of disabled people and psychologists with extensive experience of assessment methodologies and assessment practice. It reflects Team Focus’ best understanding of current legislation and good practice, and our ongoing commitment to promoting psychometrics as a tool for inclusion in all areas of life. We hope that you find this guide of value in developing your skills as a practitioner in the challenging but rewarding area of making assessments accessible and of value to all.

Angus S. McDonald
October 2006

Contents

INTRODUCTION ................................................................. 4
LEGISLATION AND ACCESSIBILITY ............................... 5
ISSUES TO CONSIDER WHEN ADAPTING ASSESSMENT MATERIALS ........................................... 7
    CONSIDERING THE CONTEXT: SELECTION AND GUIDANCE OR DEVELOPMENT ....................... 7
    TESTS OF MAXIMUM AND TYPICAL PERFORMANCE ................................................................. 8
    MAKING ADAPTATIONS .............................................................................................................. 8
GUIDANCE ON MAKING ADAPTATIONS FOR SPECIFIC CONDITIONS ........................................... 10
    VISUAL IMPAIRMENT ......................................................... 10
    DEAF OR HARD OF HEARING ............................................. 10
    PHYSICAL DISABILITY ........................................................... 11
    MEDICAL CONDITIONS ............................................................ 11
    MENTAL ILLNESS ........................................................................ 12
    LEARNING DISABILITY ............................................................ 12
    DYSLEXIA AND DYSCALCULIA .................................................... 13
ADMINISTERING ADAPTED ASSESSMENTS ................................................. 14
    REASONING SKILLS TESTS .................................................. 14
    LEARNING STYLES AND TYPE DYNAMICS INDICATOR ...................................................... 15
SCORING ADAPTED ASSESSMENTS ........................................ 16
INTERPRETING ADAPTED ASSESSMENTS .............................. 18
    REASONING SKILLS TESTS .................................................. 18
    LEARNING STYLES AND TYPE DYNAMICS INDICATOR ...................................................... 19
APPENDIX 1 – ADMINISTRATION INSTRUCTIONS FOR THE REASONING SKILLS TESTS ........... 20
    VERBAL REASONING SKILLS .............................................. 20
    NUMERICAL REASONING SKILLS .................................... 22
    ABSTRACT REASONING SKILLS ........................................ 24
Introduction

In 2004 around 7 per cent of those graduating from UK universities reported that they had a disability (AGCAS, 2006). Higher Education Institutions have made tremendous efforts to ensure that they are accessible to people with disabilities and provide rich, supportive environments in which they can study and learn. Within Higher Education, Careers Services play an increasingly central role in developing skills that complement students’ academic learning, so preparing them for the world-of-work. As part of this work, psychometric assessments are now frequently used by Careers Services as an important tool for personal development, but are often seen as being difficult to access by people with disabilities.

This document is intended to help clients of the Profiling for Success assessments from Team Focus ensure these instruments are accessible to all who want to complete them. Whilst based primarily on the legal requirements set out in the Disability Discrimination Act 1995 and 2005 (DDA), its broader aim is to help those administering and interpreting any type of psychometric or other assessment technique (e.g. in mock assessment centres) to develop their skills and confidence in making these tools accessible to all students and, through this, support students to unlock their potential.

In the context of Higher Education, psychometric assessments are primarily used for personal and career development, and for preparing students to take assessments as part of a selection process for work or further training. These applications overlap with those seen in many organisations, so much of the guidance here draws on that given to organisations using psychometrics for selection purposes. The most important difference, however, is that in a Higher Education context it is unlikely that the assessments will be tied to the skills and abilities necessary for performing a specific job role, so necessitating a more exploratory and open-ended interpretation of their meaning or validity.

In addition to these guidance notes, the pack contains paper-based versions of the assessment materials. These paper-based versions can be adapted to make them accessible to disabled people and students with other needs that may be a barrier to them using the online assessments. The exact content of this pack will depend on which of the assessment packages you subscribe to – the Reasoning Skills Tests, Personal Development Package, or both. The contents for each of these packages are:

**Reasoning Skills Tests**
- Verbal Reasoning Skills Question Booklet
- Numerical Reasoning Skills Question Booklet
- Abstract Reasoning Skills Question Booklet
- Verbal Reasoning Skills Answer Sheet
- Numerical Reasoning Skills Answer Sheet
- Abstract Reasoning Skills Answer Sheet

---

1 Figures based on self-report and showing disabilities in order of frequency to be Dyslexia (3.6%); ‘An Unseen Disability’ (1.6%); Deaf / Hearing Impaired (0.3%); Multiple Disabilities (0.3%); Blind / Partially Sighted (0.2%); Wheelchair User / Mobility Difficulties (0.2%); Mental Health Difficulties (0.1%); Personal Care Support (0.01%); Autistic Spectrum Disorder (0.01%); Disability Not Listed Above (0.7%).
Personal Development Package

- Learning Styles Indicator Questionnaire
- Type Dynamics Indicator Questionnaire

Where you see the following symbol on these materials, it means that without breaking copyright you can photocopy them or make any other adaptations that are necessary to make them accessible to a student with accessibility needs:

Important: By using these assessment materials, you are agreeing that copies and adaptations to them will only be made for students with accessibility needs that cannot be met through the Profiling for Success online assessment system. These materials are not for general use as an alternative to the online assessments.

Legislation and accessibility

The DDA made it unlawful to discriminate, intentionally or unintentionally, against a disabled person. The Act defines a disabled person as someone who has a ‘physical or mental impairment which has a substantial, long-term adverse effect on their ability to carry out normal day-to-day activities’. ‘Long-term’ means that the impairment has lasted for at least 12 months or is expected to last for at least 12 months, or that it may recur. ‘Substantial’ is defined by the Act as being not minor or trivial. In addition to current disabilities the Act also covers disabilities that a person has previously suffered, even if they are not currently affected by them.

Day-to-day activities covered by the Act are any of the following:

- Mobility
- Manual dexterity
- Physical co-ordination
- Continence
- Ability to lift, carry or otherwise move objects
- Speech, hearing or eyesight
- Memory or ability to concentrate, learn or understand
- Perception of risk or physical danger.

The oft-quoted section of the DDA relating to employment states:

“It is unlawful for an employer to discriminate against a disabled person in the arrangements which he makes for the purpose of determining to whom he should offer employment” (p10).
Once in employment:

“It is unlawful for an employer to discriminate against a disabled person whom he employs in the opportunities which he affords him for transfer, training or receiving any other benefit” (p13-14).

Opportunities for personal development such as those based around psychometric assessments clearly fall under “training or receiving any other benefit”. Therefore in the same way that aspects of a selection procedure could be deemed unlawful if they present an obstacle to a disabled person, so could access to opportunities for development. This point is clearly made in relation to Higher Education in the Special Education Needs and Disability Act 2001 (SENDA), which states that the body responsible for an educational institution must ensure that:

“In relation to student services provided for, or offered to, students by it, disabled students are not placed at a substantial disadvantage in comparison with students who are not disabled”. (p26).

The DDA differs from other legislation such as the Race Relations Act (1976) in introducing the concept of ‘reasonable adjustment’. Under the DDA any provider of goods, facilities or services is usually obliged to make adjustments if:

“A provision, criterion or practice employed on behalf of an employer... places the disabled person at a considerable disadvantage in comparison to persons who are not disabled” (p14).

In terms of psychometric assessments, there is an obligation on those administering them to make reasonable adjustments so that a disabled person can complete the assessments and gain the same benefits from them as a non-disabled person. No clear guidance is given in the DDA on what ‘reasonable adjustments’ can be made but, given the very wide range of disabilities people might present with, any such adjustments should result from a dialogue with the individual concerned – they are always the best person to explain what their needs are.

To summarise, in terms of assessment and related services, there is a clear legal and moral obligation to make these tools and the opportunities for development they offer available and accessible to disabled people. Regardless of the legal imperative, any such adjustments should be seen as part of the wider obligation to treat each person as an individual and be sensitive to their needs whether these are covered by specific legislation or not. Such practices can also be extremely beneficial for disabled people, as by allowing them to experience psychometric tools in a non-threatening and supportive environment, they will understand more about their needs. This valuable information can help them when entering into dialogue with prospective employers about the adjustments they need in order to demonstrate their true capabilities in competitive selection processes.
Issues to consider when adapting assessment materials

There are many ways in which psychometric assessments can be adapted to make them accessible to people with disabilities. The majority of these adaptations are relatively easy to make and so clearly fall within the realm of ‘reasonable adjustments’. It is all too easy when adapting assessments, however, to unintentionally make fundamental changes to the construct being measured. Even when adaptations are successfully made and the constructs being measured remain the same as a non-adapted version, the challenge is interpreting the meaning of a standardised psychometric instrument taken under non-standardised conditions. Interpretation is particularly challenging in the case of aptitude or ability tests, but also needs to be carefully considered when using personality measures. It is for these reasons that many employers will not require a disabled person to complete the normal selection process, but choose to offer them a ‘guaranteed interview’.

Despite the challenges of making good adaptations and interpreting scores under adapted conditions, it is important that students are given the opportunity to benefit from taking the assessments wherever possible.

Considering the context: selection and guidance or development

The opportunity for students to complete the Profiling for Success psychometric assessments is particularly important in a supported guidance or development context because it:

- provides students with disabilities the same opportunities for development as their non-disabled counterparts;
- gives an opportunity for students with disabilities to explore what accommodations allow them to perform at their best,
- fosters increased confidence and reduced anxiety when taking subsequent assessments.

The DDA has been most frequently interpreted from the perspective of organisations selecting people for employment. Under these conditions, assessments typically indicate a candidate’s potential for acquiring job-related skills or having the ‘softer skills’ (e.g. team working style, leadership potential) necessary for working effectively within the organisation. Psychometric assessments and other selection methods are designed to elicit evidence of these skills or abilities, with validity being determined by demonstrating their links to subsequent job or training performance.

The requirements of the DDA mean that employers must consider both their selection methods and the ways that job tasks are carried out. Adjustments to either or both of these may be necessary so that a disabled person can show their suitability for a role and carry it out effectively. A key difference when using assessments for selection compared to guidance or development, is that the latter is more open-ended and so it is unlikely that it can take into consideration specific job tasks. Within a guidance context the focus of the assessments, particularly when looking at ability, will usually be more on generic workplace skills and issues around accessing the assessments that could inform future dialogue with employers.
**Tests of Maximum and Typical Performance**

The differences between assessments of maximum (e.g. ability or aptitude tests) and typical (e.g. personality, interests or motivation) performance must be considered when making any adaptations. Generally, tests of maximum performance are likely to be affected to a greater degree by adaptations than those assessing typical performance, particularly when they involve a timed element as with the Reasoning Skills Tests.

When considering making adjustments to the Reasoning Skills Tests or other timed ability tests, it should be explained to students that any adjustments will affect the interpretation of their scores. As ability test scores result from the careful standardisation of testing conditions, instructions, test format and timing, altering any of these will impact on the normative interpretation of scores. This is particularly the case with the common adaptation of allowing extra time to complete the test, as timing is typically one of the major factors determining test score. When extra time is allowed it is strongly recommended that the number of questions answered during the standard time for the test is recorded, before allowing the test taker to continue for the additional time that has been agreed. For example, if completing the test using a paper answer sheet, test takers should use a different coloured pen for the additional time, so that their scores under both standard and extra time can be examined.

The standard timings for the Verbal, Numerical and Abstract Reasoning Skills Tests are 20, 20 and 15 minutes respectively.

**Making Adaptations**

Users of the Profiling for Success assessment system should clearly advertise to students that adapted versions of the assessments can be made available for any students who have a disability that may affect their ability to complete the assessments. Details of who students should contact about making adaptations should also be given.

Before any adaptations are made, there should always be discussion with the student. The individual student is always the person best placed to understand their unique needs, and therefore what changes they need for the assessments to be accessible. It will be useful though, to have examples of the kinds of adaptations that can be made so these can be discussed with the student (see below for suggested adaptations). Even when two students have apparently similar disabilities it should not be assumed that an adaptation appropriate for one will also be suitable for another. Each person will have developed a unique way of dealing with their disability and this needs to be the central consideration when adapting assessment materials.
For the discussion to be open and honest, it is advisable that students are told at the beginning that any information they disclose will be confidential and used only for the purposes of adapting the assessments to their needs and subsequent interpretation. It will often be useful to seek information from the student on the nature of their disability and possibly evidence for this (e.g. previously conducted diagnostic assessments). Asking them about what support they have previously found useful and what adaptations have been made for them before will also provide ideas for possible changes that are likely to be beneficial.

In addition to the assessment materials themselves, it is also necessary to consider the assessment environment. In addition to the normal requirements for buildings to be accessible to people with disabilities, attention may also need to be given to the immediate area in which assessments are being taken. For example, extra space may be needed for wheelchair users or it may be necessary to have desks or chairs that can be adjusted for height.

In the majority of cases it will be clear-cut when an adaptation to the assessment materials is necessary. For a few students though, it may not be immediately apparent whether their circumstances would classify them as having a disability (see page 4 for the DDA criteria) or their disability presents a clear barrier to them using the online assessments effectively. Under these conditions, it is advisable to ask students to try the online assessments (or at least the example and practice questions) and feedback any specific difficulties they have in accessing them. Adaptations can then be made in light of this experience, if necessary. If it is unclear whether a student would be treated by a potential employer as having a disability and so offered adjustments to a selection process, it is important that Careers Services emphasise that agreeing to make adaptations for them does not guarantee that an employer will do the same.
Guidance on making adaptations for specific conditions

This section gives suggestions for the modifications that may be made to assessment materials for students with different disabilities. The majority of these modifications will need to be made using the paper-based materials, though some suggestions also apply to the online assessments. It should be noted that the categories given here are intended to be only an organising framework. Students may have multiple needs that do not fall clearly into any single category, so flexibility is needed when evaluating the most appropriate adaptations for each individual. As stressed above, before any modifications are made it is essential that the student is consulted if the modifications are to be effective and to be seen as taking into consideration the individual’s specific needs.

Visual Impairment

It is important to remember that students are likely to have different degrees of visual impairment, from low vision or partial sight through to blindness (only about 2 per cent of people on the ‘blind’ register are actually blind). Any adaptations that are made need to reflect the individual’s degree of sightedness. Producing large-print versions of the assessments may be adequate for some, but remember that answer sheets for the Reasoning Skills Tests will also need to be enlarged. Alternatively, students may prefer to use magnifiers. Attention should also be given to the lighting in the room where the assessments are being completed.

Possible adjustments for those with visual impairment include:

- using large print
- providing a reader
- using taped or digitised audio presentation of questions
- giving responses verbally
- adjusting the lighting
- ensuring adequate allowance is made for an assistance dog, if they have one.

Deaf or Hard of Hearing

As with visual impairment, hearing impairment can range from partial hearing to deafness. For many students hearing impairment may not provide a barrier to psychometric assessments and so they can complete them online under standard conditions. People who have had a hearing impairment from an early age or who have severe deafness may be fluent in British Sign Language, effectively making English their second language even when they can lip-read English well. This should be taken into consideration when interpreting assessments with a substantial verbal component.

Language development may have been affected in cases of severe hearing impairment. In such circumstances extra time may be offered, and scores interpreted under conditions of both standard and extra time.
PHYSICAL DISABILITY

Physical disabilities or motor impairment can affect fine and/or gross motor movement in the limbs, trunk or head and neck. Co-ordination may also be affected. For people with physical disabilities, the main concerns centre on physical access to the assessment area and the assessment materials. As reading ability is normally unaffected and many students with physical disabilities may have adaptations that allow them to use computers effectively, it may be possible for them to take the online tests. If using paper versions, it must be ensured that students can turn the pages of the test booklets or questionnaires. Difficulties in recording responses on paper-based questionnaires or answer sheets can be overcome by using larger answer sheets, allowing answers to be recorded in a copy of the question booklet, or allowing students to indicate answers orally.

Possible adjustments for those with physical disability include:
- using specially adapted computer equipment
- providing large print answer sheets
- providing a scribe
- giving answers orally
- recording answers on audiotape or digitally
- making physical adjustments to the assessment room
- giving additional time
- allowing additional breaks.

MEDICAL CONDITIONS

There are a wide range of medical conditions that may be a barrier to completing assessments including chronic pain, respiratory or heart conditions. The nature of a person's difficulties will depend on their specific condition, but may include difficulty remaining seated for the duration of the assessment due to pain, fatigue or discomfort leading to difficulties in concentrating. Appropriate adjustments are likely to focus around making the assessment process more comfortable for the person through providing breaks as necessary or appropriate physical equipment (e.g. special chairs).

Possible adjustments for those with medical conditions include:
- providing a scribe
- giving answers orally
- recording answers on audiotape or digitally
- making physical adjustments to the assessment room
- allowing additional breaks.
MENTAL ILLNESS

People with a mental illness may be nervous, anxious or depressed. Potentially stressful events such as completing psychometric assessments can exacerbate these conditions, though taking them in a supportive environment can provide a very valuable opportunity in itself. Additional support may be needed for these students before they complete the assessments and also afterwards when working through the outcomes. Clarifying with students their goals in completing the assessments before they take them, and then arranging a time for reviewing the results is advisable.

Students with issues relating to mental illness are likely to be capable of completing the online assessments, though performance on the Reasoning Skills Tests may be affected by severe anxiety and difficulty in concentrating. It may therefore be preferable to take paper versions of these tests, so allowing breaks in the timed part of the test if necessary. If a student appears very nervous about the possible outcomes and to have low self-esteem, Careers Advisers or others working with the student may suggest moderating the review of outcomes by getting the assessment reports sent to them, then working through the reports with the student in a face-to-face review session.

Possible adjustments for those with mental illness include:
- face-to-face support before and after taking the assessments
- allowing breaks during the assessment
- using a quiet environment where distractions are minimal.

LEARNING DISABILITY

Students with learning disabilities may have a range of difficulties with receiving, processing, storing and retrieving information. Disabilities may be non-specific or one of the more prevalent syndromes of disabilities (e.g. dyslexia or dyscalculia discussed below, or attention deficit hyperactivity disorder (ADHD)). Many employers may choose not to test a person with non-specific learning disabilities as it can be difficult to determine to what extent a test is actually assessing an aspect of the disability, and so may be unlawful. When assessing a person with a learning disability it is important to ensure that the test is at the right level and so avoid frustration and disengagement, and that they clearly understand the instructions and examples. This does not preclude the use of the online assessments, but it is advisable to conduct the assessment individually in a supported environment where the person's understanding of the requirements and example and practice questions can be checked. Time should be given to recheck the instructions as necessary and, in the case of ability tests, it should be ensured that the need to work quickly is appreciated. With conditions such as ADHD, it is important to remember that the condition may have impacted on the person’s early educational experiences and also make it difficult for them to focus on a timed test for extended periods.
Possible adjustments for those with learning disabilities include:

- giving additional support for instructions
- providing a reader
- giving answers orally
- recording answers on audiotape or digitally
- giving additional time
- assessing individually in a quiet environment
- allowing breaks during the assessment.

**Dyslexia and Dyscalculia**

Dyslexia is an example of a specific learning difficulty but is covered separately due to its prevalence. The term dyslexia covers a cluster of difficulties around language, characterised by difficulties in reading and writing (particularly spelling) and can vary greatly in severity. Verbal reasoning tests or other tests containing a significant language component potentially present the greatest difficulties for people with dyslexia. The most common adjustment is to allow dyslexics extra time on timed tests. Usually between a quarter and a third of the standard time is added to the timed part of the test, though you can also ask students about how much extra time they have been allowed during previous exams and use this as a guide. It is also important to check that people with dyslexia clearly understand any written instructions.

Possible adjustments for those with dyslexia include:

- allowing extra time
- providing a reader.

Whereas dyslexia concerns difficulty with reading and writing, dyscalculia is a difficulty with numbers and basic mathematical concepts. Evidence of dyscalculia can include difficulties in understanding numerical operations, sequencing numbers, telling time or following directions. Some dyscalculics may experience very few difficulties whereas for others these may be more widespread and challenging. As with many 'learning difficulties', it is rare for there to be pure dyscalculics or dyslexics. For example, about 60% of dyslexics will also show evidence of dyscalculia.

Dyscalculia will obviously have most impact on numerical tests, though it is worth considering that due to overlap in symptoms, dyscalculics may also have some difficulties similar to dyslexics. As with dyslexia, allowing extra time may help some dyscalculics, though it will be important to explore with the individual their specific difficulties.
Administering adapted assessments

Adapted assessments are likely to be administered in a one-to-one setting. The exact procedure will depend on adaptations that have been made though, as far as possible, the administration should follow standard test administration procedures for ability or personality assessments.

REASONING SKILLS TESTS

Administration of ability measures such as the Reasoning Skills Tests is usually done in two sections; an informal introduction to the test session and formal administration of the test(s) where verbatim instructions are read to the test taker. Though one-to-one administrations will always be more informal than when administering to a group, it is still recommended that this process is followed. As the administrator will probably have had previous contact with the student when discussing adaptations, the informal introduction should do the following:

- introduce the administrator and the purpose of the testing session
- explain which of the assessments will be completed and what they measure
- describe what changes have been made to the assessment materials and how these will affect completion of the tests or the test session
- explain what will happen to the results (confidentiality and scoring) and how they will receive feedback on their performance
- tell test takers that they will be receiving full instructions and have a chance to try example and practice questions before the timed part of the test starts
- check that the test taker is clear about what will happen, that they are comfortable and whether they have any questions at this stage.

The aim of the informal introduction is to ensure test takers are relaxed and in an appropriate frame of mind. This is followed by the formal administration where instructions are read verbatim to ensure that all people taking the test receive the same instructions before the test starts. Depending on what adaptations have been made to the test materials and conditions, some changes from the standardised instructions may be necessary. The administration instructions for the standard Reasoning Skills Tests are given in Appendix 1.

It is not necessary for the administrator to remain in the room during the timed part of the testing unless they are aiding students through the assessment process, but it is advisable to occasionally check that the respondent is progressing satisfactorily with the test. If additional time is being allowed the administrator should be present at the end of the time normally allowed so the student can be asked to change pens, so answers given during the additional time can be scored separately.
LEARNING STYLES AND TYPE DYNAMICS INDICATOR

Administration of questionnaires such as the Learning Styles Indicator and Type Dynamics Indicator are usually conducted more informally than administrations of ability measures. When administering personality questionnaires – measures of typical performance – the purpose is to motivate honesty and openness, and to get ‘buy-in’ to the assessment process so that the respondent is eager to complete the questionnaire and understand how the information it gives can be used to further their development.

The administration of the Learning Styles Indicator and Type Dynamics Indicator should convey much of the information covered by the informal introduction to the Reasoning Skills Tests (see above). To help people understand the principles behind the questionnaires, they should be introduced to the concept of preference (e.g. through the example questions and writing their name with their preferred hand and then with their non-preferred hand) and how the model of Psychological Type is based on an understanding of preference. It is important to stress when doing this that the questionnaire is asking about preferences and not absolutes, and respondents should reflect on what comes most naturally or easily for them when responding to the statements or phrases in the questionnaire.

When respondents are happy with the concept behind the questionnaire, it is normal for the administrator to read through the instructions on the first page of the questionnaire with the respondent, checking that they are clear about them at appropriate points. Give the respondent a chance to ask any final questions and then ask them to start the questionnaire. As with the Reasoning Skills Tests it is not necessary for the administrator to remain in the room whilst the questionnaire is being completed, but it is advisable to occasionally check that the respondent is progressing satisfactorily with the questionnaire.
Scoring adapted assessments

The Profiling for Success assessments make use of sophisticated scoring and reporting procedures to generate the computer-based reports. Such reports also have the benefit of reducing potential scoring errors and saving the considerable time it can take to manually produce a comprehensive personalised report. In order that people who have completed the adapted paper-based tests benefit from these computer-generated reports, an online facility for scoring and reporting has been developed.

The online scoring facility has been developed for use by staff in the Career Services licensing the assessments. Details of how to access the online scoring facility must not be passed to students.

To access the online scoring part of the Profiling for Success assessment system go to the following website:

http://www.profilingforsuccess.com/unidirectdataentry.htm

and when prompted click on the ‘Continue’ button. You will then be prompted to enter an Access code and Password, as shown overleaf. The Access code is: data0306 and the Password: dataentry
When you click on the ‘Continue’ button from this screen you will be asked to enter the personal
details of the student who has completed the adapted assessments. You should then follow the
procedure set out below:

- enter the student’s personal details: name, age and sex, and the email (whether the student’s or
  your own) you want the assessments reports to be returned to;
- enter the student’s responses from the questionnaire or answer sheet;
- click on the ‘submit’ button and a report will be automatically generated and sent to the email
  address you entered;
- you can then choose to enter the data from another assessment for the current student or enter
  the details of a new student. (Please note that the option to ‘Enter data for a new access code’
  will take you to the screen shown above, and so should be ignored.)
- when you have entered all the assessment data, close the window to exit the data entry session.
Interpreting adapted assessments

Due to the standardised nature of psychometric assessments, whenever adaptations are made results cannot be interpreted as they would be for non-adapted assessments. As all disabled people have individual needs, it is also inappropriate to compile norm groups for disabled people. Instead standard norm groups should be used (as they are with the Profiling for Success assessments), but scores compared with them interpreted with a greater degree of flexibility and due regard for the individual’s specific circumstances. Because of this, it is strongly recommended that whenever possible disabled people are offered a face-to-face review to discuss their assessment results.

Reasoning Skills Tests

The Reasoning Skills Tests, as with all ability tests, are particularly sensitive to adaptations. This sensitivity stems from the standardisation of instructions, item presentation, response format and the controlled test time that are characteristic of psychometric ability tests. When adaptations are made, one or more of these elements will be affected, so potentially invalidating the normative interpretation of scores that would have been collected under standardised conditions.

As mentioned previously, the strict timing of ability tests is one of the key factors in standardisation. Clear interpretations of tests taken under extra time are not possible, and it is for this reason the procedure of stopping the person after the standard time and then allowing them to continue but marking their answers in a different colour is strongly advised. The two scores generated from this process can be compared to the norm group. Providing no major adjustments have been made to the actual assessment materials, the first score represents performance under non-adjusted conditions. A comparison between this score and the score after extra time should be made and the difference between them evaluated with the student.

It should also be recognised that disabled people may be somewhat slower than their non-disabled counterparts when completing the assessments. For example, a person with a physical disability may take longer to turn the pages of the question booklet or to make a physical mark on an answer sheet. Test completion may also be slower in cases where questions are read aloud by a reader. It may be desirable to allow additional time in such cases, though if this additional time is limited (e.g. 1 or 2 minutes), the differences between scores under standard and extra time are likely to be limited. Due to the highly individual nature of disabilities and how people adapt to them, this is likely to impact on a test’s reliability so increasing the amount of error in test scores. Error bands of two standard errors of measurement (SEMs) should therefore be used when interpreting test scores. For the Reasoning Skills Tests two SEMs for the Verbal, Numerical and Abstract tests are 3.20, 3.68 and 4.01 respectively.
Due to timing issues, qualitative interpretation of ability tests can provide highly informative information on adapted test outcomes. Examining the balance between speed (number of questions attempted) and accuracy (proportion of questions attempted that are answered correctly) shows a respondent’s qualitative approach to a test and how they have balanced speed and accuracy aspects of their performance. A qualitative report based on speed and accuracy is automatically produced in the Reasoning Skills tests reports. Qualitative interpretations are particularly valuable when looking at the performance of a disabled person under standard time conditions, and for conditions such as dyslexia indicate performance at least as well as comparison with a norm group.

**Learning Styles and Type Dynamics Indicator**

For most disabled people, any adaptations made to the Learning Styles Indicator or Type Dynamics Indicator should have a minimal effect on the validity of the outcomes. This is true for assessments of personality, interests or motivation generally, but is particularly the case with the Learning Styles Indicator and Type Dynamics Indicator as their assessments of preference are not primarily norm referenced.

There are three points however, that should be considered when exploring type-based reports with disabled people. The first of these concerns the exploration of reported and true type. A person’s specific difficulties or circumstances may have led them to adopt preferences that are not their ‘ideal’. This is true of people generally, but may be particularly the case with a disabled person. Exploration of reported and true type should take this into account, acknowledging the potential impact of circumstances on preference and allowing space to explore the implications of this with the respondent. The second point relates to people with mental illness, where it should be recognised that some conditions or medication may affect decision-making. For some this may make it difficult for them to report clearly on their preferences, which again should be explored during a review session. Finally, if a respondent is giving their responses orally to another to person record, aspects of social desirability may lessen their likelihood of giving more extreme responses. Whilst this should have minimal effects on an instrument assessing preference such as the Type Dynamics Indicator, it can have a greater effect on normative instruments.
Appendix 1 – Administration instructions for the Reasoning Skills Tests

VERBAL REASONING SKILLS

After giving the informal introduction, read aloud the instructions in the shaded boxes.

Here is the answer sheet for the Verbal Reasoning test (hand out answer sheet).

Please fill in your first name, surname, age, gender, and today’s date in the spaces provided on the front of the question booklet. Today’s date is (give today’s date).

Please look at the section marked ‘Instructions’ on page 3 of the question booklet and follow as I read them aloud.

The Verbal Reasoning test looks at your ability to think logically about written information. In this test, you will see passages of text. For each passage, there will be four statements relating to the text. You have to read each passage of text carefully and then decide whether the statements follow logically from the information in the passage.

For each statement, there are three answer options you can choose from:

- **True**: This means that, on the basis of the information in the passage, the statement is true or logically follows from the passage.
- **False**: This means that, on the basis of the information in the passage, the statement is false.
- **Can't tell**: This means that you cannot tell from the information in the passage whether the statement is true or false.

When deciding whether a statement is true, false or you can't tell, it is important to base your answer only on the information in the passage and not on any other knowledge you may have. Your task is simply to judge whether or not the statement follows logically from the passage.

Do you have any questions at this stage?

Answer any questions about the instructions.

In a moment, we will look at some example and practice statements. These are not part of the timed test but are there to make sure that you understand what you have to do.

On your answer sheet there are spaces to mark your answers to the practice statements. You should mark your answers by putting a clear line through the relevant box. If you make a mistake, cross it out clearly and mark your new answer. There are two sheets of paper on your desk for rough working. When you reach the end of the practice shapes put your pen down. Do not go on to the next page.

Please turn to the next page, read the examples and then work through the practice statements.
When the practice shapes have been completed read out the answers:

The answers to the practice statements are as follows:

- statement 1 is Can't tell
- statement 2 is True
- statement 3 is False
- statement 4 is False

Does you have any questions before we start the test?
Answer queries about the practice statements and about the conduct of the test, but not the content of the test.

Do not turn to the next page of the question booklet until I say. You will have 15 minutes to complete the test, so work as quickly and as accurately as you can. If you cannot answer a question, skip it and come back to it later. If you need assistance during the test, raise your hand.

Please turn to the next page... and now begin.

After exactly 20 minutes:

Stop. Put your pen down now and close your question books.

Collect in the test materials and explain what will happen next.
NUMERICAL REASONING SKILLS

After giving the informal introduction, read aloud the instructions in the shaded boxes.

Here is the answer sheet for the Numerical Reasoning test (hand out answer sheet).

Please fill in your first name, surname, age, gender, and today's date in the spaces provided on the front of the question booklet. Today's date is (give today's date).

Please look at the section marked 'Instructions' on page 3 of the question booklet and follow as I read them aloud.

The Numerical Reasoning test looks at your ability to solve numerical problems. At the top of each page you will see some numerical information. Below this there are four questions. For each question you are given five possible answer options, labelled ‘a’, ‘b’, ‘c’, ‘d’ and ‘e’.

Work out the correct answer to each question using the numerical information provided, then select this form the five options.

Please not that you should not use calculators for this test.

Do you have any questions at this stage?

Answer any questions about the instructions.

In a moment, we will look at some example and practice questions. These are not part of the timed test but are there to make sure that you understand what you have to do.

On your answer sheet there are spaces to mark your answers to the practice questions. You should mark you answers by putting a clear line through the relevant box. If you make a mistake, cross it out clearly and mark your new answer. There are two sheets of paper on your desk for rough working. When you reach the end of the practice shapes put your pen down. Do not go on to the next page.

Please turn to the next page, read the examples and then work through the practice questions.

When the practice shapes have been completed read out the answers:

The answers to the practice questions are as follows:

- question 1 is E
- question 2 is C
- question 3 is A
- question 4 is C

Does you have any questions before we start the test?
Answer queries about the practice questions and about the conduct of the test, but not the content of the test.

Do not turn to the next page of the question booklet until I say. You will have 15 minutes to complete the test, so work as quickly and as accurately as you can. If you cannot answer a question, skip it and come back to it later. If you need assistance during the test, raise your hand.

Please turn to the next page... and now begin.

After exactly 20 minutes:

Stop. Put your pen down now and close your question books.

Collect in the test materials and explain what will happen next.
**ABSTRACT REASONING SKILLS**

After giving the informal introduction, read aloud the instructions in the shaded boxes.

Here is the answer sheet for the Abstract Reasoning test (*hand out answer sheet*).

Please fill in your first name, surname, age, gender, and today’s date in the spaces provided on the front of the question booklet. Today’s date is (*give today’s date*).

Please look at the section marked ‘Instructions’ on page 3 of the question booklet and follow as I read them aloud.

The Abstract Reasoning test looks at your ability to identify relationships between shapes. In this test you will see two sets of shapes, labelled ‘Set A’ and ‘Set B’. All of the shapes in Set A are similar in some way, as are the shapes in Set B. Set A and Set B are not related to each other.

You have to work out how the shapes in Set A are related to each other and how the shapes in Set B are related to each other. You then have to work out whether each of six further shapes, labelled ‘a’, ‘b’, ‘c’, ‘d’, ‘e’ and ‘f’, belongs to Set A, Set B or Neither set.

Does you have any questions at this stage?

Answer any questions about the instructions.

In a moment, we will look at some example and practice statements. These are not part of the timed test but are there to make sure that you understand what you have to do.

On your answer sheet there are spaces to mark your answers to the practice statements. You should mark your answers by putting a clear line through the relevant box. If you make a mistake, cross it out clearly and mark your new answer. There are two sheets of paper on your desk for rough working. When you reach the end of the practice shapes put your pen down. Do not go on to the next page.

Please turn to the next page, read the examples and then work through the practice shapes.

When the practice shapes have been completed read out the answers:

The answers to the practice shapes are as follows:

- statement 1 is Set B
- statement 2 is Neither
- statement 3 is Set B
- statement 4 is Set A
- statement 5 is Set A

Does you have any questions before we start the test?

Answer queries about the practice shapes and about the conduct of the test, but not the content of the test.

Do not turn to the next page of the question booklet until I say. You will have 15 minutes to complete the test, so work as quickly and as accurately as you can. If you cannot answer a question, skip it and come back to it later. If you need assistance during the test, raise your hand.

Please turn to the next page … and now begin.
After exactly 15 minutes:

Stop. Put your pen down now and close your question books.

Collect in the test materials and explain what will happen next.
VERBAL REASONING SKILLS
QUESTION BOOKLET
Verbal reasoning skills
verbal reasoning skills
Instructions

The Verbal Reasoning Skills test looks at your ability to think logically about written information. In this test, you will see passages of text. For each passage, there will be four statements relating to the text. Your task is to read each passage of text carefully and then decide whether each statement follows logically from the information in the passage.

For each statement there are three answer options you can choose from: True, False or Can’t tell.

- **True**
  This means that, on the basis of the information in the passage, the statement is true or follows logically from the passage.

- **False**
  This means that, on the basis of the information in the passage, the statement is false.

- **Can’t tell**
  This means that you cannot tell from the information in the passage whether the statement is true or false.

When deciding whether a statement is true, false or can’t tell, it is important to base your answer only on the information in the passage and not on any other knowledge you may have. Your task is simply to judge whether or not the statement follows logically from the passage.

Do not go on until you are told to
Example statements

Coffee is one of the major products of many Latin American countries, often accounting for over one third of their exports. Between 20 and 25 million people work in the coffee industry, many of them small farmers. Although most coffee is produced by developing countries, the main consumers are developed countries such as the United States and Europe.

The amount of coffee grown has doubled in the last 50 years. This increase in demand is changing farming methods. There are now fewer small, traditional farms, as coffee growers have moved to larger farms where they grow more high-yield plants and make increased use of fertilisers.

Statement E1. Methods of producing coffee are changing due to increased demand.

This statement is ‘true’. The passage states ‘The amount of coffee grown has doubled’, and that this ‘increase in demand is changing farming methods’.

Statement E2. Latin American countries are the main producers of coffee.

The correct answer to this statement is ‘can’t tell’. Although the passage says that ‘Coffee is one of the major products of Latin American countries’, it does not tell us that Latin American countries are the major producer of coffee.

Statement E3. Coffee is drunk mainly in the countries that produce it.

The answer to this question is ‘false’. The passage states that ‘the main consumers are developed countries’ but that ‘most coffee is produced by developing countries’. Therefore most coffee is not drunk in the same countries that produce it.
Practice statements

Before the development of modern technology, people relied on their own observations and experience to predict the weather. It was known that certain atmospheric conditions were likely to lead to different types of weather. This knowledge was often put into rhymes or proverbs to help people remember them. A well-known example of this is ‘Red sky at night, shepherd’s delight, red sky in the morning, shepherd’s warning’. In other words, if the sky is red in the evening, expect good weather, but if it is red in the morning, expect bad weather. Although a ‘red sky’ is quite an accurate predictor of the weather, many proverbs are no better than chance as predictors.

Statement P1: Modern methods of predicting the weather are not always accurate.

Statement P2: Atmospheric conditions can indicate what the weather is likely to be.

Statement P3: All proverbs are poor predictors of the weather.

Statement P4: If there is a red sky in the morning, there is a good chance that the weather will be fine.
Chocolate has long been thought to have therapeutic powers. The Aztecs of South America, from where chocolate originates, claimed it have great physical powers and spiritual wisdom. As chocolate spread around the world, so did the claims made about it.

We now know that the powers of chocolate come from the fat and carbohydrate it contains. Fat and carbohydrate are fuel for the body, and as fat is digested more slowly the feeling of being ‘full’ remains for some time. Chocolate also stimulates the central nervous system in a similar way to caffeine.

Statement 1: The claims made for chocolate have no scientific basis.

Statement 2: Caffeine and chocolate can have similar effects.

Statement 3: The Aztecs discovered chocolate.

Statement 4: The claims that chocolate gives ‘physical powers’, are likely to come from it being a source of energy.
The Purewater Company Ltd has sent the following information to all its customers:

This letter tells you how to decide if you are entitled to claim a surface water drainage allowance. If you are eligible to claim the allowance, your water bill will be reduced. The average amount of the allowance will be £15 per year, but the exact figure depends on the size of your property.

Surface water is water that falls on your roof or any hard covered surface of your property. To claim the allowance, the rainwater from your paths and driveways must run into the soil and all the rainwater from your roof must drain into a soakaway. A soakaway is where surface water is piped into a large hole filled with small stones, situated on your property.

Most houses in towns are connected to public sewers that drain away surface water and so will not qualify for the allowance.

Statement 5: It is possible to qualify for the allowance if you live in a town.

Statement 6: If you qualify, the largest allowance is £15 per year.

Statement 7: Few houses in the countryside are connected to a public sewer.

Statement 8: You are entitled to the allowance if the water from your roof at the front of the house drains into the sewer but the water from the back runs into a soakaway.
Cavies, or guinea pigs as they are more commonly known, are as easy to keep as rats and mice, although their dietary requirements are different. As they are unable to climb, jump, burrow or run very well, they are easier to manage. They are very different in temperament from rats and mice, being timid and completely harmless little animals. They are the cleanest of small mammals and seldom suffer from disease if properly managed.

Being less intelligent than other rodents, however, cavies are correspondingly less interesting and do not get up to all the tricks and mannerisms shown by mice and rats. But for anyone who wants a clean, hardy, harmless little animal whose needs are frugal and whose colours are as diverse as they are beautiful, the cavy makes an ideal pet.

Statement 9: Cavies are more interesting in terms of colours than behaviour.

Statement 10: ‘Cavy’ is the less popular term for ‘rodent’.

Statement 11: A guinea pig’s diet is more similar to that of a rabbit than that of a mouse or rat.

Statement 12: Cavies are more resistant to disease than rats or mice.
Travelling to work by car is a very costly activity. It is unproductive, frustrating and stressful. It has been shown that less time spent travelling improves people’s attitude to work, increases productivity and reduces stress. A recent feasibility study has shown that it is possible to improve rail travel making it cost efficient and more relaxing than car travel. Initially the costs appear high. However, the study showed the benefits to the nation to be a reduction in the average number of car miles, savings in raw material costs, less congestion, less pollution, a reduction in the road building programme and less demand on the health care services. Clearly no government with a view to the longer term can ignore such benefits.

Statement 13: The nation needs to increase productivity and reduce costs.

Statement 14: Hospitals deal with too many car accident victims.

Statement 15: Travelling by car to work is beneficial to health.

Statement 16: If people have more leisure time they will feel better.
Many large organisations require their managers to adopt a highly structured approach both to giving feedback and acting on the results of staff attitude surveys. Their feedback must generate tangible action points which need to be implemented over a specified time period. In many ways, this approach is prescriptive.

As today’s managers work in a climate of intense, competing demands, it is easy for the results of an attitude survey to be lost in a pile of tasks which can often be regarded as more important. The fact that managers are so busy can result in a more directive approach from their directors, who ensure that responding to the survey results merits an urgent ranking.

**Statement 17:** It is important to strike a balance between formal structures for acting on survey results and complete managerial freedom.

**Statement 18:** Managers who decide what action to take as a result of staff attitude surveys work in less prescriptive organisations.

**Statement 19:** Generating tangible action points and a time-scale for their implementation, is an example of a prescriptive management style.

**Statement 20:** Directors believe that managers should take a more structured approach when dealing with survey results.
After an outdoor security light has been fitted, it should be tested. The lamp will illuminate for approximately 5 seconds on each occasion movement is detected, and this can be tested by walking across the detection area 4-5 metres from the light. The light will operate each time you are detected. Remaining still for approximately 5 seconds will cause the lamp to extinguish. Now continue to move; the lamp will illuminate again as it detects your movement.

Repeat the above process, approaching the light at different angles and from different distances. Doing so will allow you to establish the light’s detection area. By angling the sensor unit downward you decrease the light’s area of detection, whereas pointing the sensor up more will increase the area of detection.

Statement 21: Only on the first occasion that the light is activated, will the lamp illuminate for about 5 seconds.

Statement 22: The light can be adjusted so that it will come on for more than 5 seconds.

Statement 23: If the light’s detection area is too great, angling the sensor downward should help.

Statement 24: Once the light has illuminated and then extinguished once, the sensor will not detect you again until you reset it manually.
Rules of the game

Each player starts the game with two counters of the same colour (red, green, blue or yellow). One counter is placed at the centre of the maze and the other at the beginning of the maze. The object of the game is to be the first player to unite your two counters by landing them both on the same square. This can be any square within the maze. Players take it in turn to throw both dice and move their counters through the maze using the following rules:

1. You may move one counter by combining the scores of both dice or two counters by using the scores of each dice separately.
2. You may move each of your counters either forwards or backwards through the maze, though each counter can be moved in only one direction in any one turn.
3. If you throw a double, you may take another turn.
4. If you land your counter on the same square as another player’s counter, you may ‘banish’ that counter to any of the four corners of the maze or to the centre of the maze.

Statement 25: The object of the game is to unite your counters at the centre of the maze.

Statement 26: If the 'blue' player's counters are on adjacent squares, the game will be over on their next turn.

Statement 27: You have landed your green counter on a square occupied by a red counter. You could 'banish' the red counter to the centre of the maze.

Statement 28: If your throw of the dice scores 3 and 6, you could move the same counter 3 forward and 6 back in one turn.
Instructions for fitting oil seals

When oil seals are to be removed, it will be necessary to renew them; this is the case whether they are removed as part of a larger assembly or individually.

The oil seal has a fine sealing lip that is prone to damage if insufficient care is taken during handling. It will fail to form an adequate seal if it comes into contact with a scratched or indented surface, or a surface that is not completely clean.

Lubricate the seal lips with oil before fitting; where seals of a dual-lipped nature are used, a suitable grease should be used to fill the gap between the two lips. Unless the manufacturer states otherwise, oil seals are to be positioned with the sealing lips facing toward the lubricant to be sealed.

Statement 29: If the oil seal is removed as part of an assembly, it is not necessary to renew it.

Statement 30: The sealing lip will form an adequate seal with a scratched surface, if the surface is perfectly clean.

Statement 31: It is during fitting that the sealing lips are most likely to become damaged.

Statement 32: Oil can be used as a lubricant on the seal lips before fitting.
Any moral and ethical position would require that employers provide a safe environment for their employees. Any law on Health and Safety is inevitably based on such a position. How, then, is it possible for some employers to require their employees to undertake dangerous activities? For example, deep sea diving is an inherently dangerous activity, as is rescuing people from burning buildings. Even more difficult is the question of Health and Safety for the armed forces. Clearly there are issues concerning the interpretation of morality, even though it is clear that these occupations are operating within the law.

Statement 33: The issue of Health and Safety is not subject to any legal control.

Statement 34: It is perfectly legal for employers to let employees undertake tasks that could endanger their health.

Statement 35: It is illegal for Firefighters, during the course of their normal duties, to undertake tasks which might endanger their health.

Statement 36: Health and Safety legislation is a good thing for employees.
In order to pass the course, candidates must demonstrate that they have acquired a basic knowledge of the subject by passing a written test on the last day of the course and completing two practical assignments during the course.

Each practical assignment is completed twice; the second time giving candidates the chance to correct any shortcomings from the first. Each practical is judged against a number of criteria. The candidate must meet these criteria in at least one of the practical sessions for each assignment. Over the two sessions, 80% of the criteria must be met in order to pass each practical assignment.

Statement 37: A candidate who passes this course can be assumed to have an intermediate knowledge of the subject.

Statement 38: The pass mark for the course is 80%.

Statement 39: In total, a candidate will take part in two practical sessions.

Statement 40: A candidate cannot pass a practical assignment on the first session alone.
After the steep increase in oil prices, money was placed in international banks by countries unable to spend their new-found wealth. The banks, obliged to find ways of using this money, started lending much of it to developing countries, who were in need of funds to buy oil partly due to the increase in price. Secure in the belief that countries could not go bust, banks sometimes lent unwisely.

Statement 41: Developing countries had to borrow money to pay for oil from oil-producing countries.

Statement 42: Some developing countries ran into difficulty in repaying loans from banks.

Statement 43: The banks were sometimes misguided in their lending policies.

Statement 44: Poorer countries were left in debt to many oil-producing nations.
The evidence that music is a universal language which transcends history and experience is very compelling. You simply need to observe how tunes and melodies which people have never heard before evoke the same emotion. Some people have tried to explain these emotions in terms of Western composers adopting a common language. In other words they use the same melodic phrases, harmonies and rhythms to represent particular emotions, and all who are exposed to them learn this language.

Can this explain, however, why people who have never heard Western music before describe feeling the same emotions as their Western counterparts? It is more likely that the mathematical relationship between notes and phrases explains the truly universal nature of music.

Statement 45: The same tune can provoke very similar emotions in people from Western and non-Western countries.

Statement 46: Moving from one key to another during a piece of music creates tension which evokes emotion.

Statement 47: The mathematical relationship between notes can be decoded to predict the emotions a tune is likely to evoke.

Statement 48: It is likely that the ‘language’ of music is learned through exposure.
Over 10 years there has been a 31% rise in suicides among the under-25 age group. In 1999, in Britain alone, 748 people in this age band killed themselves; male suicides outnumbering female by 4 to 1. These statistics are surprising as many more women report feeling depressed than men, and depression is the most frequent reason for suicide.

**Statement 49:** In 1999, more men in Britain committed suicide than women.

**Statement 50:** More under-25s took their own lives in the last decade than ever before.

**Statement 51:** Feeling depressed does not affect whether a person may commit suicide.

**Statement 52:** Fewer than 748 people in Britain in the under-25 age group committed suicide in 1998.
A man visiting a European town decides to visit its centre. He turns right out of his hotel and walks along the road until he reaches the crossroads at the end. At this stage, he has passed the following buildings of note: an art gallery, two banks, another hotel and a hypermarket. At the crossroads, he turns right toward the church he can see at the end of the street.

At the end of this street, the man thinks about some of the buildings he has passed: a run-down apartment block, another hypermarket, a furniture store, another bank, the post office, a delicatessen and two bakeries. The street ends in a square, beyond which is the church. The man turns around at this point and heads back to the crossroads, where he then continues straight over.

**Statement 53:** The man has turned right at road junctions twice.

**Statement 54:** Before passing the apartment-block, the man has already walked past three banks.

**Statement 55:** The art gallery is to his right when the man walks across the crossroads.

**Statement 56:** There are more bakeries between the church and the crossroads, than there are between the man's hotel and the crossroads.
Pennywise Bank has written the following letter to its customers:

I am writing to let you know that the interest we pay on your Super Savings account has been reduced. You will find the new rate in the enclosed leaflet. The leaflet gives the interest rates for all our investment accounts as well as the previous rates which applied.

As you know, we always write to tell you whenever we change the interest rate on your account because we are committed to the Banking Code. This voluntary code sets standards of good practice for banks and building societies in dealings with their personal customers. As well as writing to you, we will continue to use national newspapers to advertise rates on all our accounts, and we will display this information in your local branch.

**Statement 57:** Banks and building societies must abide by the Banking Code.

**Statement 58:** Pennywise Bank has reduced the interest rates on all its investment accounts.

**Statement 59:** The Banking Code does not apply to the bank’s business customers.

**Statement 60:** You can find out how much interest Pennywise Bank charges on personal loans from the leaflet enclosed with this letter.
NUMERICAL REASONING SKILLS
QUESTION BOOKLET
numeric reasoning skills
numerical reasoning skills
Instructions

The Numerical Reasoning Skills test looks at your ability to solve numerical problems. At the top of each page you will see some numerical information. Below this there are four questions. For each question, you are given five possible answer options, labelled ‘a’, ‘b’, ‘c’, ‘d’ and ‘e’.

Work out the correct answer to each question using the numerical information provided, then select this from the five options.

Please note that you should not use calculators for this test.
Example questions

The bar chart shows the number of cars sold by four garages in one year.

![Bar chart](image)

**Question E1.** How many cars did the four garages sell in total?

- a 120
- b 130
- c 140
- d 150
- e 160

The correct answer is 150, which is found by adding the number of cars sold by each garage (25+40+52+33).

**Question E2.** The total value of cars sold by Garage 1 was £262,500. What was the average cost of a car sold by Garage 1?

- a £10,000
- b £10,500
- c £11,000
- d £11,500
- e £12,000

The correct answer is £10,500. To find the average cost of each car, you have to divide the total value of the cars (£262,500) by the number of cars sold (25).

**Question E3.** The following year, the number of cars sold by Garage 2 increased by 30%. How many cars in total did Garage 2 sell during this year?

- a 12
- b 38
- c 40
- d 48
- e 52

The correct answer is 52. To find the increase in the number of cars sold you have to find 30% of 40, which is 12, and then add this to the number of cars sold the previous year (40).
Practice questions

The pie chart shows the sales of CDs, cassettes, videos and DVDs from a music shop during one week.

Question P1. What was the total value of the CDs, cassettes, videos and DVDs sold during the week?
   a £3,000  b £3,500  c £4,000  d £4,500  e £5,000

Question P2. The average cost of a DVD is £20. How many DVDs were sold during the week?
   a 20  b 30  c 80  d 300  e 800

Question P3. What is the ratio of the value of cassette sales to DVD sales?
   a 1:4  b 1:3  c 3:4  d 3:1  e 4:1

Question P4. What percentage of the sales came from cassettes?
   a 2%  b 4%  c 8%  d 10%  e 12%
The lengths of carpet on four rolls is shown in metres (m):

<table>
<thead>
<tr>
<th>Roll</th>
<th>Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8</td>
</tr>
<tr>
<td>B</td>
<td>16</td>
</tr>
<tr>
<td>C</td>
<td>24</td>
</tr>
<tr>
<td>D</td>
<td>18</td>
</tr>
</tbody>
</table>

**Question 1.** What is the total length of carpet on the four rolls?

a  44m  
b  46m  
c  56m  
d  64m  
e  66m

**Question 2.** What is the difference in the lengths of the longest and shortest rolls?

a  8m  
b  10m  
c  12m  
d  16m  
e  24m

**Question 3.** The carpet on Roll A costs £22.50 per metre? How much does the complete roll cost?

a  £140.00  
b  £160.00  
c  £176.00  
d  £176.40  
e  £180.00

**Question 4.** The carpet on Roll B costs £960. How much would the complete Roll C cost if the carpet on Roll C was the same price per metre as the carpet on Roll B?

a  £144  
b  £640  
c  £968  
d  £1290  
e  £1440
Dry-cleaning Charges:

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shirt</td>
<td>£2.20</td>
</tr>
<tr>
<td>Jacket</td>
<td>£6.60</td>
</tr>
<tr>
<td>Trousers</td>
<td>£4.50</td>
</tr>
<tr>
<td>Skirt</td>
<td>£4.50</td>
</tr>
<tr>
<td>Coat</td>
<td>£10.30</td>
</tr>
<tr>
<td>Suit</td>
<td>£11.00</td>
</tr>
</tbody>
</table>

Special offer: Jackets, Trousers, Skirts – have any three of these items cleaned for £10

Question 5. How much would it cost to have two pairs of Trousers and a Shirt cleaned?

a £11.20   b £12.20   c £12.50   d £31.20   e £13.50

Question 6. How much would you save if you had two Jackets and a pair of Trousers cleaned using the special offer?

a £6.50   b £6.62   c £7.70   d £16.62   e £17.70

Question 7. How many Shirts could you have cleaned for the same price as one Jacket?

a 2   b 3   c 4   d 5   e 6

Question 8. How much would it cost to have two Skirts, a Jacket and a Coat cleaned using the special offer?

a £15.60   b £16.90   c £20.30   d £21.40   e £25.90
Anytown College has 2500 full-time students. Students enrol in the department where they do most of their work. The pie chart below shows how many enrol in each of the main departments. The remaining number have not been allocated to a particular department.

Question 9. How many students are enrolled in the Tourism department?
   a 50  b 200  c 250  d 500  e 2000

Question 10. How many more students are there in Science & Humanities than Engineering?
   a 3  b 30  c 75  d 300  e 750

Question 11. What is the ratio of the number of students in the Tourism department to the Engineering department?
   a 10:19  b 9:10  c 10:9  d 19:10  e 2:1

Question 12. In one year, the college increases its numbers by 4% spread evenly across the departments and those not allocated. How many students are not allocated to departments in this year?
   a 100  b 275  c 286  d 375  e 385
Question 13.  5 people stay at Gulls Roost for a week beginning 8th September. How much does it cost per person?

- a £60
- b £75
- c £85
- d £90
- e £125

Question 14.  4 people stay for 5 days at The Lodge from 21st June. How much does it cost per person?

- a £54.00
- b £67.50
- c £75.00
- d £82.50
- e £95.00

Question 15.  The following year, prices at Rose Cottage are increased by 6%. How much would a week at Rose Cottage from 7th April cost the following year?

- a £185.50
- b £211.50
- c £225.00
- d £238.50
- e £262.50

Question 16.  The prices at Tamarisk are increased by 5% from 04/01 to 21/07 and by 10% from 21/07 to 22/12. What is the approximate increase in price for a two week holiday starting on 14th July?

- a 5%
- b 7.2%
- c 7.5%
- d 7.8%
- e 10%
The graph shows how long employees have worked for a company.

**Question 17.** What is the most common length of time that employees have worked for the company?
- a 0-6 months
- b 6-12 months
- c 1-2 years
- d 2-5 years
- e over 5 years

**Question 18.** What percentage of all female employees have worked for the company for between 1 and 2 years?
- a 0.5%
- b 4%
- c 5%
- d 6%
- e Can't tell

**Question 19.** How long after starting are employees most likely to leave the company?
- a 0-6 months
- b 6-12 months
- c 1-2 years
- d 2-5 years
- e Can't tell

**Question 20.** What is the difference between the percentage of males and the percentage of females who have worked for the company for 6 to 12 months?
- a 2.5%
- b 4.4%
- c 8%
- d 10%
- e 27.5%
One wall of a large washroom is shown. The lower section of the wall is tiled and the upper section painted. The tiles measure 0.3m by 0.4m.

### Question 21.
What is the total area of the wall including door and window?

- a 22m²
- b 37m²
- c 52m²
- d 54m²
- e 57m²

### Question 22.
What is the area of one tile?

- a 0.012m²
- b 0.12 m²
- c 0.7 m²
- d 1.2 m²
- e 1.4 m²

### Question 23.
How many tiles are required to cover the area shown?

- a 135
- b 156
- c 180
- d 200
- e 240

### Question 24.
The window is replaced. The area of the new window is 20% bigger than the original one. Which of the following could be the dimensions of the new window?

- a 4m x 0.9m
- b 4m x 0.8m
- c 3m x 0.6m
- d 3m x 0.8m
- e 3m x 1.1m
Question 25. How much milk contains 6g of fat?

a  4 ml  b  240 ml  c  400 ml  d  600 ml  e  1200 ml

Question 26. What percentage of the recommended daily allowance of calcium would you get from 400 ml of milk?

a  20%  b  40%  c  60%  d  80%  e  100%

Question 27. What is the recommended daily allowance of calcium?

a  24.4 mg  b  122 mg  c  244 mg  d  488 mg  e  610 mg

Question 28. What is the combined amount of protein and calcium in 200ml of milk?

a  3.522g  b  6.944g  c  7.044g  d  7.44g  e  9.24g
A clock and a watch are set to the correct time at 9.00am on Monday morning. The clock loses 1 minute every 6 hours and the watch gains 1 minute every 8 hours.

**Question 29.** What time will the clock tell at 9.00am the following Wednesday?

- a 8.52am  
- b 8.54am  
- c 8.56am  
- d 9.06am  
- e 9.08am

**Question 30.** How long will it be before the watch is exactly 11 minutes fast?

- a 2 days  
- b 2 days 18 hours  
- c 3 days 8 hours  
- d 3 days  
- e 3 days 16 hours

**Question 31.** On the following Friday at 5.00pm, what time will the watch tell?

- a 4.47pm  
- b 5.12pm  
- c 5.13pm  
- d 5.14pm  
- e 6.36pm

**Question 32.** On the following Thursday the time according to the watch is 9.09am. What is the time according to the clock?

- a 8.48am  
- b 8.51am  
- c 8.57am  
- d 9.00am  
- e 9.12am
Question 33. Shares in Company Y were worth £5.76 at the end of Year 2. What were they worth at the beginning of Year 1?

a £1.92  

b £2.88  

c £3.54  

d £4.32  

e £7.68

Question 34. At the beginning of Year 1, your shares in Company X were worth £336 and your shares in Company Y were worth £540. What was the total value of your shares at the end of Year 2?

a £2016  

b £2376  

c £2736  

d £3464  

e £3688

Question 35. The value of shares in Company Y quadrupled in the third year, to reach a value of 192p. What was their value at the end of the first year?

a 24p  

b 32p  

c 36p  

d 48p  

e 96p

Question 36. At the end of the second year, a share in Company X is worth the same as a share in Company Y. Which of these could have been the value of shares in Companies X and Y respectively, at the beginning of Year 1?

a 60p and 240p  

b 60p and 360p  

c 60p and 400p  

d 80p and 360p  

e 80p and 400p
Mr Verma, Ms White and Ms Capelli invested £10,000, £18,000 and £16,000 respectively in a new business. The graph shows how the company performed over the first four years. The profit is the difference between the income and running costs. Each year the profit was divided amongst the three investors in proportion to the amount they initially invested.

Question 37. In which year were the investors’ initial investments paid back from company profits?
- a  Year 1
- b  Year 2
- c  Year 3
- d  Year 4
- e  Can’t tell

Question 38. On average, what proportion of the company’s income was profit over the four years?
- a  37.5%
- b  40%
- c  54%
- d  60%
- e  62.5%

Question 39. By how much did profits increase between Years 1 and 2?
- a  10.5%
- b  20%
- c  54.5%
- d  120%
- e  220%

Question 40. In Year 5, Mr Verma receives £5250. How much profit did the business make in Year 5?
- a  £8400
- b  £9450
- c  £14,700
- d  £17,850
- e  £23,100
A company wants to build a garden feature in their grounds, consisting of a 10m square flower bed surrounded by a paved area, as shown below. The paved area will use 500mm square slabs and will be two slabs wide. Square slabs cost £4 each.

**Question 41.** What is the total cost of the slabs?

a £368  
b £384  
c £684  
d £704  
e £768

**Question 42.** What would it cost to fill the flower bed to a depth of 750mm with topsoil costing £4 per cubic metre?

a £300  
b £363  
c £400  
d £624  
e £3000

**Question 43.** The same area could be paved with 250mm square slabs which cost £1.50 each. By how much would the total cost of the paving slabs change?

a Reduce by 50%  
b Reduce by 25%  
c No change  
d Increase by 25%  
e Increase by 50%

**Question 44.** The paving slabs are 250mm deep and the topsoil in the flower bed is 750mm deep.

What is the ratio of the volume of the paving to the volume of the topsoil?

a 11:75  
b 12:75  
c 11:25  
d 12:25  
e 33:25
The sun moves 15 degrees each hour from east to west.
The point at which the sun is highest in the sky is called the ‘meridian’.
The Greenwich meridian is at 0 degrees longitude.

**Question 45.** The sun crosses the Greenwich meridian at 12.00. When will the sun reach 37½ degrees west?

- a 09.30
- b 12.30
- c 13.45
- d 14.30
- e 17.00

**Question 46.** The meridian of Poole is 2 degrees west. The meridian of Cork is 10 degrees west. How long after the sun crosses the Poole meridian does it cross the Cork meridian?

- a 4 minutes
- b 8 minutes
- c 16 minutes
- d 32 minutes
- e 40 minutes

**Question 47.** From where you are standing, the sun is at its meridian eight hours before it reaches the Greenwich meridian. How far east are you?

- a 32 degrees
- b 60 degrees
- c 80 degrees
- d 120 degrees
- e 160 degrees

**Question 48.** Athens is 23 degrees east. Lisbon is 11 degrees west. How long after the sun has crossed the Athens meridian will it cross the Lisbon meridian?

- a 48 minutes
- b 1 hour 36 minutes
- c 2 hours 6 minutes
- d 2 hours 16 minutes
- e 2 hours 34 minutes
reasoning skills
abstract reasoning skills
Instructions

The Abstract Reasoning Skills test looks at your ability to identify relationships between shapes. On each page you will see two sets of shapes, labelled ‘Set A’ and ‘Set B’. All of the shapes in Set A are similar in some way, as are the shapes in Set B. Set A and Set B are not related to each other.

You have to work out how the shapes in Set A are related to each other and how the shapes in Set B are related to each other. You then have to work out whether each of five further shapes belongs to Set A, Neither set or Set B.
The correct answer is ‘Set B’, as all of the shapes in Set A have curved edges and all of the shapes in Set B have straight edges. In this example the colour of the shapes and the number of shapes is not important, as Sets A and B have both black and white shapes in them, and some cells have more than one shape.

The correct answer is ‘Neither’. As this shape has both straight and curved edges, it does not fit clearly into either set.

The correct answer is ‘Set A’. This shape has curved edges and so belongs in Set A.
Practice shapes

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Set A Diagram" /></td>
<td><img src="image" alt="Set B Diagram" /></td>
</tr>
</tbody>
</table>

P1

P2

P3

P4

P5

Make no marks on this page
abstract reasoning skills

Make no marks on this page

**Set A**

| ▼▼ ▼+ | △△△ | ▼▼ ▼+ |
| ▼+ ▼+ | △△△ | ▼+ ▼+ |
| ★★ ★★ | ★★ ★ | ★★ ★ |
| ⌄⌊ ⌄+ | ⌄+ ⌄+ | ⌄+ ⌄+ |

**Set B**

| △★△ | △★△ | △★△ |
| ♥♥ | ♥♥ | ♥♥ |
| ☐☐ ☐☐ | ☐☐ ☐☐ | ☐☐ ☐☐ |
| ☐☐ ☐☐ | ☐☐ ☐☐ | ☐☐ ☐☐ |

1 2 3 4 5
Make no marks on this page

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Set A" /></td>
<td><img src="image2" alt="Set B" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Image 6" /></td>
<td><img src="image4" alt="Image 7" /></td>
<td><img src="image5" alt="Image 8" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6" alt="Image 9" /></td>
<td><img src="image7" alt="Image 10" /></td>
</tr>
</tbody>
</table>
### abstract reasoning skills

Make no marks on this page

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Set A 1" /></td>
<td><img src="image2.png" alt="Set B 1" /></td>
</tr>
<tr>
<td><img src="image3.png" alt="Set A 2" /></td>
<td><img src="image4.png" alt="Set B 2" /></td>
</tr>
<tr>
<td><img src="image5.png" alt="Set A 3" /></td>
<td><img src="image6.png" alt="Set B 3" /></td>
</tr>
<tr>
<td><img src="image7.png" alt="Set A 4" /></td>
<td><img src="image8.png" alt="Set B 4" /></td>
</tr>
<tr>
<td><img src="image9.png" alt="Set A 5" /></td>
<td><img src="image10.png" alt="Set B 5" /></td>
</tr>
<tr>
<td><img src="image11.png" alt="Set A 6" /></td>
<td><img src="image12.png" alt="Set B 6" /></td>
</tr>
</tbody>
</table>

**Sets 11, 12, 13, 14, 15**

Go on to the next page
### Abstract Reasoning Skills

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**21**

**22**

**23**

**24**

**25**
abstract reasoning skills
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Set A" /></td>
<td><img src="image2" alt="Set B" /></td>
</tr>
</tbody>
</table>

36 37 38

39 40

Make no marks on this page
<table>
<thead>
<tr>
<th><strong>SET A</strong></th>
<th><strong>SET B</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image7" alt="Diagram" /></td>
<td><img src="image8" alt="Diagram" /></td>
</tr>
</tbody>
</table>

41 42 43 44 45
Make no marks on this page

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Set A" /></td>
<td><img src="image2.png" alt="Set B" /></td>
</tr>
</tbody>
</table>

### 46

### 47

### 48

### 49

### 50

Go on to the next page
abstract reasoning skills

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

51  52  53  54  55
Make no marks on this page

### Set A

1. 
2. 
3. 
4. 
5. 

### Set B

1. 
2. 
3. 
4. 
5. 

---

56 57 58 59 60

Go on to the next page
## abstract reasoning skills

<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Set A" /></td>
<td><img src="image2" alt="Set B" /></td>
</tr>
</tbody>
</table>

### Symbols
- 61
- 62
- 63
- 64
- 65

*Make no marks on this page*
<table>
<thead>
<tr>
<th>Set A</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image7" alt="Diagram" /></td>
<td><img src="image8" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image9" alt="Diagram" /></td>
<td><img src="image10" alt="Diagram" /></td>
</tr>
<tr>
<td><img src="image11" alt="Diagram" /></td>
<td><img src="image12" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Make no marks on this page
abstract reasoning skills

Make no marks on this page

Set A        Set B

End of test
Instructions

Mark one answer for each statement, using a pencil or a ball-point pen. Mark your answers by putting a clear line through the relevant box. If you make a mistake, cross it out clearly and mark your new answer.

Practice statements

<table>
<thead>
<tr>
<th>P1</th>
<th>True</th>
<th>False</th>
<th>Can't tell</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2</td>
<td>True</td>
<td>False</td>
<td>Can't tell</td>
</tr>
<tr>
<td>P3</td>
<td>True</td>
<td>False</td>
<td>Can't tell</td>
</tr>
<tr>
<td>P4</td>
<td>True</td>
<td>False</td>
<td>Can't tell</td>
</tr>
</tbody>
</table>

1 | True | False | Can't tell |
2 | True | False | Can't tell |
3 | True | False | Can't tell |
4 | True | False | Can't tell |
5 | True | False | Can't tell |
6 | True | False | Can't tell |
7 | True | False | Can't tell |
8 | True | False | Can't tell |
9 | True | False | Can't tell |
10 | True | False | Can't tell |
11 | True | False | Can't tell |
12 | True | False | Can't tell |
13 | True | False | Can't tell |
14 | True | False | Can't tell |
15 | True | False | Can't tell |
16 | True | False | Can't tell |
17 | True | False | Can't tell |
18 | True | False | Can't tell |
19 | True | False | Can't tell |
20 | True | False | Can't tell |
21 | True | False | Can't tell |
22 | True | False | Can't tell |
23 | True | False | Can't tell |
24 | True | False | Can't tell |
25 | True | False | Can't tell |
26 | True | False | Can't tell |
27 | True | False | Can't tell |
28 | True | False | Can't tell |
29 | True | False | Can't tell |
30 | True | False | Can't tell |
31 | True | False | Can't tell |
32 | True | False | Can't tell |
33 | True | False | Can't tell |
34 | True | False | Can't tell |
35 | True | False | Can't tell |
36 | True | False | Can't tell |
37 | True | False | Can't tell |
38 | True | False | Can't tell |
39 | True | False | Can't tell |
40 | True | False | Can't tell |
41 | True | False | Can't tell |
42 | True | False | Can't tell |
43 | True | False | Can't tell |
44 | True | False | Can't tell |
45 | True | False | Can't tell |
46 | True | False | Can't tell |
47 | True | False | Can't tell |
48 | True | False | Can't tell |
49 | True | False | Can't tell |
50 | True | False | Can't tell |
51 | True | False | Can't tell |
52 | True | False | Can't tell |
53 | True | False | Can't tell |
54 | True | False | Can't tell |
55 | True | False | Can't tell |
56 | True | False | Can't tell |
57 | True | False | Can't tell |
58 | True | False | Can't tell |
59 | True | False | Can't tell |
60 | True | False | Can't tell |
**Numerical Reasoning Skills**

Instructions

Mark one answer for each question, using a pencil or a ball-point pen. Mark your answers by putting a clear line through the relevant box. If you make a mistake, cross it out clearly and mark your new answer.

Practice questions

<table>
<thead>
<tr>
<th>P1</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>P3</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>P4</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>3</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>4</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>5</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>6</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>7</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>8</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>9</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>10</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>11</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>12</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>13</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>14</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>15</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>16</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>17</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>18</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>19</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>20</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>21</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>22</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>23</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>24</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>25</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>26</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>27</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>28</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>29</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>30</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>31</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>32</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>33</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>34</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>35</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>36</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>37</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>38</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>39</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>40</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>41</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>42</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>43</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>44</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>45</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>46</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>47</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>48</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
</tbody>
</table>

These materials may only be used by licensed users of Profiling for Success. By using this material you are agreeing that copies and adaptations will only be made for students with accessibility needs that cannot be met through the Profiling for Success online assessment system. These materials are not for general use as an alternative to the online assessments.
# Instructions

Mark one answer for each statement, using a pencil or a ball-point pen. Mark your answers by putting a clear line through the relevant box. If you make a mistake, cross it out clearly and mark your new answer.

## Practice shapes

<table>
<thead>
<tr>
<th>P1</th>
<th>Set A</th>
<th>Neither</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>P3</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>P4</td>
<td>Set A</td>
<td>Neither</td>
<td>Set R</td>
</tr>
<tr>
<td>P5</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>Set A</th>
<th>Neither</th>
<th>Set B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>3</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>4</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>5</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>6</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>7</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>8</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>9</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>10</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>11</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>12</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>13</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>14</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>15</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>16</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>17</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>18</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>19</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>20</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>21</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>22</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>23</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>24</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>25</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>26</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>27</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>28</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>29</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>30</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>31</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>32</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>33</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>34</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>35</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>36</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>37</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>38</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>39</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>40</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>41</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>42</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>43</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>44</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>45</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>46</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>47</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>48</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>49</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>50</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>51</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>52</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>53</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>54</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>55</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>56</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>57</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>58</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>59</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>60</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>61</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>62</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>63</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>64</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>65</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>66</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>67</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>68</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>69</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>70</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>71</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>72</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>73</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>74</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
<tr>
<td>75</td>
<td>Set A</td>
<td>Neither</td>
<td>Set B</td>
</tr>
</tbody>
</table>

These materials may only be used by licensed users of Profiling for Success. By using this material you are agreeing that copies and adaptations will only be made for students with accessibility needs that cannot be met through the Profiling for Success online assessment system. These materials are not for general use or as an alternative to the online assessments.

Published by Team Focus Limited, Heritage House, 13 Bridge Street, Maidenhead, SL6 8LR, UK.
Printed in Great Britain.
TYPE DYNAMICS INDICATOR
& LEARNING STYLES INDICATOR
questionnaires