ACER Select
Manual

ACER

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About *ACER Select*

Background

ACER Select has been developed in response to demand for updated norms on *ACER Higher Test* and *ACER Advanced Test*. The relationship between previous ACER tests and *ACER Select* is shown in Table 1.

Table 1 Relationship Between ACER Higher and Advanced Tests and ACER Select

Higher Test ML–PL ⟶	ACER General Select Verbal
Higher Test MQ–PQ ⟶	ACER General Select Numerical
Advanced Test AL–BL ⟶	ACER Professional Select Verbal
Advanced Test AQ–BQ ⟶	ACER Professional Select Numerical

As well as providing updated norms, items from each of the *ACER Higher Test* and *ACER Advanced Test* forms have been combined to produce one test. The language of the items has also been revised to remove any gender stereotyping and reflect current usage.

Description of the Tests

ACER Select is designed to measure verbal and numerical abilities as demonstrated by the capacity to see relationships and solve problems.

The tests are primarily intended as a measure of general ability for selection into occupations that involve a moderate to high level of demand on reasoning ability, and for other purposes where the ability to think clearly with words and numbers is involved. Consequently the tests do not include tasks that involve non-verbal perceptual material which should be included if the test were intended to give a balanced measure of general cognitive ability.

While the questions require the use of words and numbers, the level of knowledge required (except in the case of the vocabulary items) is within the general knowledge of most people who have completed Year 10.

Test Format

The complete publication comprises this Manual and the four test booklets: *ACER General Select Verbal*, *ACER General Select Numerical*, *ACER Professional Select Verbal*, *ACER Professional Select Numerical*. The test booklets are both question and answer sheets – candidates mark their answers on the booklets. As such, they are not reuseable.

No part of this manual or the four test booklets may be photocopied or reproduced in any way without explicit permission from ACER.

Typical Uses

Occupational Uses

The tests may be used in the selection of staff where training is involved, and for positions where there is a moderate to high level of demand on reasoning ability, e.g. technical, clerical and administrative positions, managerial or leadership positions, etc. (see Test Selection, p. 3).

Educational and Vocational Counselling Uses

The tests also may be used in conjunction with a record of attainment of the candidate and with other data, in counselling the candidate in the selection of appropriate courses of study, and in the selection of occupations where further study and training are involved. (See Nelson Bolles 2002, Holland 1997, Kummerow 1991, Anastasi 1976, Cronbach, 1970.) When supported by other evidence of differential ability, substantial differences in performance on the two sections (Verbal and Numerical) can be valuable in the counselling process.

2 Test Selection

Selecting the Appropriate Form (General or Professional)

Both *ACER General Select* and *ACER Professional Select* are suitable for use with candidates aged 15 years and older. Selection of the appropriate test is determined by the level of education of the candidate and/or the nature of the position for which they are applying.

ACER General Select

ACER General Select is the easier of the two tests and is intended for use with candidates who have completed Year 10, and candidates who are applying for a variety of technical, clerical and administrative positions where in-service training, part-time or after-work study is involved.

ACER Professional Select

ACER Professional Select is the more challenging test and is appropriate for use with candidates who have completed at least Year 12, and for candidates applying for positions where the work requires a high level of reasoning ability, or where these qualities will become increasingly important as staff are promoted in a career system, e.g. graduate recruitment, managerial or leadership roles.

Selecting the Appropriate Section (Numerical or Verbal)

Both tests have a Verbal and Numerical section which are presented in separate test booklets. Decisions regarding which section to select will be driven by the nature of the job for which candidates are being tested. In some instances it may be appropriate to use only one of the sections (Verbal or Numerical), and in some instances it will be appropriate to use both.

Examples of appropriate tests for selected jobs are given in Table 2 .

Table 2 Examples of Appropriate Tests for Selected Jobs

ACER General Select

Verbal only	*Numerical only*	*Both*
Personal assistant	Accounts clerk	Customer service operator
Market research interviewer	Insurance investigator	Call centre operator

ACER Professional Select

Verbal only	*Numerical only*	*Both*
Workplace trainer	Computer programmer/analyst	Graduates
Journalist/copywriter	Market research analyst	HR manager
		Legal clerk

3 Directions for Administration

The administration directions and practice questions for the Verbal sections of *ACER General Select* and *ACER Professional Select* are the same. The same applies to the administration and practice questions for the Numerical sections.

General Information

The data for the interpretation of these tests were collected using standardised instructions. It is important that the examiner does not depart from these instructions when administering the test. To achieve this, the following points should be carefully observed:

1 When administering these tests **do not vary** in any way from the instructions given in the manual. (See pp. 7–12.)

2 No candidate should see a test booklet before testing time, and during the testing session there should be no opportunity for a candidate to see any test booklet other than their own. All test booklets should be accounted for at the completion of testing.

3 These are timed tests; it will be necessary to have either a stopwatch or an ordinary watch with a second-hand. If the latter is used, the starting and finishing times of the testing session should be recorded. The time limits given for the working of each section of the test should be observed **exactly**.

4 If a test candidate asks a question during the practice items, it should be dealt with as follows:

   a If the question concerns details of procedure, e.g. 'Where do I write the answers?', it should be answered directly.

   b If the question concerns the explanation of an answer, the relevant instructions should be repeated. Paraphrasing should be used with great caution to ensure that the explanation does not differ in any substantial way from that given in the instructions.

   Once candidates have started work on the actual test paper, **no questions other than procedural questions should be answered**.

5 To ensure that the candidates perform at their best, the anxiety level of the candidates should be minimal. Therefore, while adhering strictly to the instructions, try to avoid any feeling of strain or strangeness. The physical comfort of the candidates should be given careful consideration; the testing environment should have adequate seating, work space, lighting and ventilation.

6 All practical arrangements should be considered well before the testing session. The following points should be noted:

   a The tester should be familiar both with the directions for administration and the relevant test booklet well before the testing session.

   b A place for testing should be arranged and the seating and room layout checked.

   c Adequate quantities of test materials should be available.

   d If more than 30 candidates are to be tested, an assistant should be present.

   e Although candidates usually provide their own pens/pencils, the tester is advised to provide a few spares.

   f Measures should be taken to ensure that external noise is minimal and that the testing session will be completed without interruption.

Formal training in test administration is available at the ACER Centre for Professional Learning.

Specific Instructions

The detailed instructions for both test sections set out **exactly** what should be done and said. The spoken instructions are enclosed in boxes and should be given verbatim. Do not say anything other that what is indicated in the boxes.

When administering both sections of a test, the Verbal section should **always** be administered before the Numerical section. Some practice effect occurs for the section given second. The norms have been developed with the Verbal section given before the Numerical section.

Instructions for Administration of the Verbal Section

1   Make sure all candidates have a pen or pencil.

2   Say:

> When you receive this booklet, please fill in the details requested at the top of the page. Do not turn over the page until you are told to do so.

3   Distribute the test booklets for the Verbal section of the test you have selected to administer (*ACER General Select* or *ACER Professional Select*) and allow time for the filling in of details. If you require any additional details entered on the test booklet, these should be asked for now.

4   Say:

> Look at the front page and follow while I read. On this page you will find a number of practice questions to help you in the test that follows. All the questions require short answers. The answer to each question is to be written in the box or boxes at the end of each question.
>
> Look at **EXAMPLE A**. **Car** is to **land** as **ship** is to – oar, sail, travel, sea, or plane. Just as a car travels on the land, a ship travels on the sea. **Sea** has the letter **D** beside it, so **D** has been written in the box as the answer.
>
> Now do **Question 1** yourself.

Allow approximately 30 seconds.

5   Say:

> The answer to **Question 1** is **C**, so you should have written **C** in the box. *(Pause.)*
>
> Now look at **EXAMPLE B**. This is a different kind of question. Four of the following things are **alike** in some way. Write the letters of the **other two** in the boxes. *(Read slowly, pausing between alternatives.)* – coat, hat, ball, dress, cup, shoe. **Ball** and **cup** are different because all the others are things that people wear. **Ball** and **cup** are **C** and **E**, so **C** and **E** have been written in the boxes.
>
> Now do **Question 2** yourself.

Allow approximately 30 seconds.

6 Say:

> The answers to **Question 2** are **D** and **F**, so you should have written **D** and **F** in the boxes. *(Pause.)*
>
> Now look at **EXAMPLE C**. Find the word that means **most nearly** the **same** as **join** – mend, connect, choose, like, scatter. **Connect** means most nearly the same as **join**. **Connect** is **B**, so **B** is written in the box.
>
> Now do **Question 3** yourself.

Allow approximately 30 seconds.

7 Say:

> The answer to **Question 3** is **C**, so you should have written **C** in the box. *(Pause.)*
>
> Now look at **EXAMPLE D**. Find the two statements which together prove that **planes travel faster than ships.** *(Pause.)* Planes travel faster than trains; some planes have jet engines; ships travel on the water; trains travel faster than ships; some trains travel very fast. The only two statements which **prove** that planes travel faster than ships are **A** and **D**, so **A** and **D** have been written in the boxes. Although the other statements may be true, they are not necessary for the proof.
>
> Now do **Question 4** yourself.

Allow approximately 30 seconds.

8 Say:

> The answers to **Question 4** are **B** and **E**, so you should have written **B** and **E** in the boxes. *(Pause.)*
>
> You will have **15 minutes** to do the test. Try each question as you come to it. If you find a question is too difficult, leave it and come back to it later if you have time. Do not spend too much time on any one question. Make any corrections clearly.
>
> Turn over the page and start work.

9 Allow **exactly 15 minutes** for the candidates to attempt the test. At the end of this time…

10 Say:

> Please stop work, and put your pencils down.

It is essential that candidates have written their names and other details on their test papers. Please check that this information is complete as you collect the booklets.

11 Collect the test booklets and make sure they are all accounted for.

Instructions for Administration of the Numerical Section

1 Say:

> When you receive this booklet, please fill in the details requested at the top of the page. Do not turn over the page until you are told to do so.

2 Distribute the test booklets for the Numerical section of the test you have selected to administer (*ACER General Select* or *ACER Professional Select*) and allow time for filling in the details. If you require any additional details entered on the test booklet, these should be asked for now.

3 Say:

> Look at the front page and follow while I read. On this page you will find a number of practice questions to help you in the test that follows. The answer to each question is to be written in the box or boxes, or on the line, at the end of each question.
>
> Look at **EXAMPLE A**. Find the missing number in the following sequence. *(Read slowly, pausing between numbers.)* – 3, 6, 9, 12, blank. The numbers increase by three each time, so **15** is the missing number. **15** is written in the box at the end of the question. (*Pause.*) In this type of question you are looking for the **most obvious** next number in the sequence.
>
> Try **Question 1** yourself.

Allow approximately 30 seconds.

4 Say:

> The numbers go 4, 3, 6, 5, blank, 7, 10. Here the numbers go down one from 4 to 3, up three to 6, down one to 5, up three to 8, down one to 7, and up three to 10. The missing number is **8**. You should have written **8** in the large box at the end of the question (**not** in the small box that is part of the question).
>
> Do **Question 2**. Notice that there are two missing numbers in this question.

Allow approximately 30 seconds.

5 Say:

> The answers to **Question 2** are **6** and **10**. *(Pause.)*
>
> Now look at **EXAMPLE B**. This is a different kind of question. In the following table two numbers are missing. *(Pause)* 3, 5, 7 *(Pause)* 6, dash, 10 (*Pause*) 9, 11, shaded square.
>
> You have to find the number that should be in the shaded square. Going across, you can see that the numbers increase by two each time. *(Pause.)* Going down, the numbers increase by three each time. So the number that should be in the shaded square is **13**. *(Pause.)* **13** has been written in the box at the end of the question. Notice that you can get the answer by working across or by going down. In this type of question you **do not work diagonally**. *(Pause.)* There is no need to write in the other missing number in the table unless you want to. *(Pause.)*
>
> Try **Question 3** by yourself.

Allow approximately 30 seconds.

6 Say:

> The answer to **Question 3** is **9**.
>
> Now look at **Question 4**. Notice that in this table three numbers are missing: there is a dash, an asterix and a shaded square. Find the number that goes in the shaded square.

Allow approximately 30 seconds.

7 Say:

> The answer to **Question 4** is **11**. Remember, there is no need to write the other missing numbers in the table and you should not work diagonally.
>
> **Question 5** is a different type of question. A car travels at an average speed of 60 kilometres per hour. How many hours will it take to travel 180 kilometres? *(Pause.)* Write the answer to this question on the line.

Allow approximately 30 seconds.

8 Say:

> The answer to **Question 5** is **3**, so you should have written **3** on the line. *(Pause.)*
>
> You will have **20 minutes** to do the test. Try each question as you come to it. If you find a question is too difficult, leave it and come back to it later if you have time. Do not spend too much time on any one question. Make any corrections clearly. You may use the left-hand side and bottom of the page to do any rough working.
>
> Turn over the page and start work.

9 Allow **exactly 20 minutes** for the candidates to attempt the test. At the end of this time…

10 Say:

> Please stop work and put your pencils down.

It is essential that candidates have written their names and other details on their test papers. Please check that this information is complete as you collect the booklets.

11 Collect the test booklets and make sure they are all accounted for.

Technical Information

Study Design

ACER Select was developed in response to market research and a demand for updated norms of the *ACER Higher Tests ML–MQ* (2nd edition) and *PL–PQ*, and the *ACER Advanced Tests AL–AQ* (2nd edition) and *BL–BQ*.

Market research also indicated that two forms of each test were no longer required. Consequently, items from ML–MQ and PL–PQ were combined to produce *ACER General Select Verbal* and *Numerical*, while items from AL–AQ and BL–BQ have been combined to produce *ACER Professional Select Verbal* and *Numerical*.

No new items have been written for *ACER General Select* and *ACER Professional Select*. However, the wording of some items has been modified to remove gender stereotyping and reflect current usage. An example of this is the change from, 'A nurseryman sold …' to 'A plant nursery sold …'

Tables 5 and 6 show the number of items selected from the *ACER Higher* and *Advanced Tests* to produce *ACER General Select* and *ACER Professional Select*. The number of items on all tests and the amount of time allowed to complete each section remain unchanged.

Table 5 Source of Items for ACER General Select Verbal and Numerical

ACER General Select Verbal

	ML (linguistic)		PL (linguistic)		Total items
	Unchanged items	Revised items	Unchanged items	Revised items	
	17	0	17	0	34

ACER General Select Numerical

	MQ (quantitative)		PQ (quantitative)		Total items
	Unchanged items	Revised items	Unchanged items	Revised items	
	10	4	16	4	34

Table 6 Source of Items for ACER Professional Select Verbal and Numerical

ACER Professional Select Verbal

AL (linguistic)		BL (linguistic)		Total items
Unchanged items	Revised items	Unchanged items	Revised items	
22	2	5	0	29

ACER Professional Select Numerical

AQ (quantitative)		BQ (quantitative)		Total items
Unchanged items	Revised items	Unchanged items	Revised items	
21	2	6	0	29

Standardisation of ACER General Select and ACER Professional Select

Given the practical difficulties in sourcing representative samples of adults, the last year of compulsory schooling has long been regarded as providing an adequate estimate of performance for an adult sample. Due to increased retention rates over recent years, and the purpose of these tests, it was decided that Year 11 students would provide a better estimate of adult performance levels than Year 10 students.

A representative sample of 60 secondary schools in New South Wales was drawn with the probability of selecting a school being proportional to the enrolment. Thirty-eight schools were able to participate after a further 60 replacement schools were approached. The decision to participate or not was made at the school level, not by individuals, with non-participation therefore being the result of school-based factors, rather than the result of the characteristics of individual students.

Table 7 shows the relationship between the percentage of schools targeted by the sample and the percentage of schools agreeing to participate.

Table 7 Participating Schools

	% of schools targeted in sample	% of schools participating in study
Catholic Education Office Schools	23%	23%
Government Schools	65%	50%
Independent Schools	12%	26%

Table 8 shows the number of students in the number of classes by sector who participated in the study.

Table 8 Participating Students

	Number of students	*Number of classes*	*% of students in sample from each sector*	*% of Yr 11 students in NSW in 2002*	*% of Yr 11 students in Aust. in 2002*
Catholic Education Office Schools	271	12	32%	23%	21%
Government Schools	382	22	45%	63%	63%
Independent Schools	180	12	21%	14%	16%
TOTAL	833	46			

Whole classes of Year 11 English students were nominated by schools and the tests were randomly distributed within each class. Table 9 shows the total number of students completing each test.

Table 9 Total Students

ACER General Select Verbal and Numerical	439
ACER Professional Select Verbal and Numerical	409

Testing took place over a seven-week period towards the end of Term 3 and the beginning of Term 4 in 2002.

Reliability

To indicate the degree of precision of measurement for the sets of items in *ACER General Select* and *ACER Professional Select* the reliability coefficient known as 'Cronbach's alpha' has been computed. Cronbach's alpha is a measure of internal consistency of the items. The higher the value of the alpha, the more reliable the test. For cognitive measures such as *ACER General Select* and *ACER Professional Select*, values of 0.8 or above for alpha are regarded as acceptable. The alpha coefficients for these tests are given in Table 10 on page 22.

Table 10 Summary Statistics

Test	Number of items	Number of cases	Average scale score	Standard deviation (SD)	Reliability (alpha)
ACER General Select Verbal	34	430	104.5	9.9	0.81
ACER General Select Numerical	34	428	98.7	14.3	0.89
ACER Professional Select Verbal	29	402	97.2	11.2	0.82
ACER Professional Select Numerical	29	402	88.8	11.9	0.80

An analysis by gender is provided in Table 11.

Table 11 Mean Scale Score by Gender

Test	Gender	Number of students (*)	Mean (Scale score)	Standard deviation	t
ACER General Select Verbal	Male Female	170 241	106.7 102.5	9.6 9.7	4.41**
	TOTAL	411	104.2	9.9	
ACER General Select Numerical	Male Female	168 240	102.8 94.6	13.6 12.7	6.12**
	TOTAL	408	98.0	13.7	
ACER Professional Select Verbal	Male Female	146 205	97.8 97.1	10.9 10.8	0.53
	TOTAL	351	97.4	10.8	
ACER Professional Select Numerical	Male Female	146 206	91.3 86.4	11.2 11.0	4.1**
	TOTAL	352	88.5	11.3	

(*)   Not all students declared their gender, thus the numbers do not add up to the total number of students who did the test

(**) $p < 0.05$

Calculating the Scale Scores

The *ACER General Select* and *ACER Professional Select* have been calibrated using the Rasch measurement model (Fisher & Molenaar 1995). The average item difficulty was then set at 100.

It should be noted that in preparing the percentile distributions of scale scores two assumptions were made:

1 the scale scores in the Year 11 cohort would be normally distributed; and
2 the best estimate of the mean and standard deviation of the normal distribution of performance in the Year 11 cohort would be the mean and standard deviation of the corresponding observed distribution.

The norm tables presented were therefore derived using normalised distributions of performance by the Year 11 cohort.

Content Validity

The selection of item types—and of specific questions within these types—has been designed to emphasise the perception of relationships in materials presented in verbal and numerical form. Reading ability has been kept to the minimum necessary for the presentation of the tasks. Although some difficult vocabulary questions have been included, the vocabulary of the remaining questions should be well within the knowledge of lower secondary students.

The types of item used in the tests are set out in Table 12.

Table 12 Item Types Used in ACER General Select and ACER Professional Select

	General Select Verbal	General Select Numerical	Professional Select Verbal	Professional Select Numerical
Verbal reasoning	8		6	
Synonyms	9		6	
Vocabulary	9		6	
Analogies	8		7	
Antonyms			4	
Number sequences		9		6
Arithmetical reasoning		18		17
Number matrices		7		6

Further information regarding the reliability and validity of items included in *ACER General Select* is available in the *ACER Higher Tests ML–MQ* (2nd edition) and *PL–PQ Manual* (Australian Council for Educational Research, 1981).

Further information regarding the reliability and validity of items included in *ACER Professional Select* is available in the *ACER Higher Tests AL–AQ* (2nd edition) and *BL–BQ Manual* (Australian Council for Educational Research, 1982).

Factor Analysis

ACER General Select

The items were grouped by type into eight subgroups, with an average of eight items in each. Arithmetical reasoning items were allocated alternately, in order of difficulty, to two subgroups.

A principal component analysis was carried out on the data for 439 subjects from the norming sample who were tested with *ACER General Select*. The intercorrelations for the test are shown below in Table 13, and the factor loadings on the first two principal components are given in Table 14.

Table 13 Intercorrelations Between Item Types in ACER General Select

	Verbal reas.	*Syn-onyms*	*Vocab.*	*Ana-logies*	*No. seq.*	*Arith. reas. A*	*No. mat.*	*Arith. reas. B*
Verbal reasoning								
Synonyms	0.51							
Vocabulary	0.51	0.60						
Analogies	0.57	0.55	0.56					
Number sequences	0.35	0.27	0.28	0.32				
Arithmetical reasoning A	0.46	0.34	0.37	0.39	0.70			
Number matrices	0.35	0.23	0.32	0.33	0.67	0.60		
Arithmetical reasoning B	0.44	0.34	0.39	0.39	0.71	0.76	0.56	

Cronbach's alpha for *ACER General Select Verbal* is 0.81 (see Table 10). On the basis of this figure we can expect 19 per cent of the variance to be error of measurement. Cronbach's alpha for *ACER General Select Numerical* is 0.89. On the basis of this figure we can expect 11 per cent of the variance to be error of measurement.

Factor analysis shows that two factors are extracted after rotation, as shown in Table 14. Factor 1 loads heavily on verbal items, and Factor 2 on numerical items. The two factors account for approximately equal amounts of variance.

Table 14 Rotated Factor Loading (varimax) for ACER General Select

Item type	Factor 1	Factor 2
Verbal reasoning	0.307	0.726
Synonyms	0.118	0.826
Vocabulary	0.188	0.804
Analogies	0.226	0.789
Number sequences	0.886	0.143
Arithmetical reasoning A	0.836	0.285
Number matrices	0.802	0.165
Arithmetical reasoning B	0.821	0.289
Proportion of variance	37.4%	33.6%

ACER Professional Select

The items were grouped by type into nine subgroups, with an average of six items in each. The Arithmetical reasoning items were allocated alternately, in order of difficulty, to two subgroups. A principal component analysis was carried out on the data for the 409 subjects from the norming sample who were tested with *ACER Professional Select*. The intercorrelations for the test are shown in Table 15 on page 26.

Table 15 Intercorrelations Between Item Types in ACER Professional Select

	Verbal reas.	Syn- onyms	Ant.	Vocab.	Ana- logies	No. seq.	Arith. reas. A	No. mat.	Arith. reas. B
Verbal reasoning									
Synonyms	0.54								
Antonyms	0.50	0.50							
Vocabulary	0.47	0.42	0.43						
Analogies	0.58	0.53	0.50	0.50					
Number sequences	0.40	0.32	0.30	0.24	0.37				
Arithmetical reasoning A	0.47	0.42	0.30	0.32	0.42	0.55			
Number matrices	0.33	0.26	0.23	0.14	0.24	0.38	0.32		
Arithmetical reasoning B	0.48	0.43	0.31	0.36	0.39	0.53	0.66	0.36	

Cronbach's alpha for *ACER Professional Select Verbal* is 0.82 (see Table 10). On the basis of this figure we can expect 18 per cent of the variance to be error of measurement. Cronbach's alpha for *ACER Professional Select Numerical* is 0.80. On the basis of this figure we can expect 20 per cent of the variance to be error of measurement.

Factor analysis shows that two factors are extracted after rotation as shown in Table 16. Factor 1 loads heavily on verbal items, and Factor 2 on numerical items. The two factors account for approximately equal amounts of variance.

Table 16 Rotated Factor Loading (varimax) for ACER Professional Select

Item type	Factor 1	Factor 2
Verbal reasoning	0.692	0.402
Synonyms	0.711	0.292
Antonyms	0.757	0.135
Vocabulary	0.751	0.091
Analogies	0.761	0.260
Number sequence	0.192	0.779
Arithmetical reasoning A	0.306	0.760
Number matrices	0.077	0.662
Arithmetical reasoning B	0.316	0.756
Proportion of variance	32.63%	28.16%

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Case Studies

Example 1
Recruitment for Public Sector Department

A recruiting officer for a public sector department has been put in charge of the graduate selection program. There are 500 initial applicants and the recruiting officer's aim is to reduce that number to approximately 50 for the next stage. Knowing that successful applicants will need to demonstrate a high level of both verbal and numerical reasoning, with verbal having a higher priority, she decides to screen all applicants with *ACER Professional Select Verbal* and *ACER Professional Select Numerical*.

She arranges for all applicants to attend one of four testing sessions over two days. After the last testing session is completed, all the tests are scored and each candidate's percentile score and stanine are noted. This information is entered into a spreadsheet.

Using the spreadsheet, the recruiting officer orders the list by percentile rank for the Verbal section. In scanning down the list from highest percentile rank to lowest, the recruiting officer notes that selecting a cut-off score of the 95th percentile for the Verbal section would retain 62 candidates. These candidates are then ordered by percentile rank for the Numerical section. Of the 62 candidates, 47 are ranked higher than the 93rd percentile. This number is in line with the number of candidates the recruiting officer was hoping to select for the next stage, and confirms that all the selected candidates demonstrate satisfactory levels of verbal and numerical reasoning skills.

Example 2
Call Centre Selection

A recruitment agency has been asked to fill five vacancies in a call centre. On advertising the position, 200 suitable applications are received. This number is reduced to 50 by the consultant on reviewing the applicants' CVs.

The consultant in charge of the contract speaks with the manager of the call centre about the job. In their discussion, the consultant notes that for this position, a moderate level of verbal reasoning skills are required so that customer enquiries can be dealt with in a clear, logical and informed manner. Numerical reasoning skills are not required. The manager indicates that she would like to have the applicants undergo some ability testing and attend a group interview in which various role-play activities

will be conducted. From this exercise, 10 applicants will be selected for individual interviews.

The consultant invites the 50 applicants to attend the group interview. Before starting the role-play activities, he administers *ACER General Select Verbal* to all the applicants. The candidates scores are tallied and percentile ranks and stanines calculated. These results are entered into a spreadsheet.

At the completion of the group interview, the consultant has made a list of the 10 most likely candidates for the next stage, and a further 10 'possibles'. He compares this list against the results of the test. He notes that of the list of 'most likely candidates', two have performed poorly or very poorly on the test, with percentile ranks of 28 or below. The other eight have performed well or very well, with percentile ranks above 70. He looks at the scores of the next list of 'possibles' and sees that two have performed very well on the test, with percentile ranks above 70. He adds these to the list of eight from the 'most likely candidates' for further interviewing.

Example 3
Promoting Floor Staff to Store Manager

A trucking company is looking to promote one of the warehouse floor staff to the position of store manager. In addition to general organisational skills, the store manager must be able to work with basic mathematical concepts in areas such as stock control.

Five of the warehouse staff apply for the position, and the general manager decides to interview them all. The HR manager administers *ACER General Select Numerical* to all candidates. The scores are calculated and supplied to the general manager along with each candidate's employment record and letter of application, as evidence of the applicant's numerical reasoning ability.

Of the five applicants, two score low or very low, at stanine 3 or below. One of the applicants scores at stanine 5, while the other two applicants score at stanines 7 and 8. The HR manager points out to the general manager that the difference between stanines 7 and 8 is small and that both of these candidates have a high level of numerical reasoning—significantly higher than the candidates who scored at stanine 5 and at stanine 3 or below.