

I-ASSESS

GETTING STARTED WITH CBAs

Contents

1	Introduction	1
1.1	What is i-assess?	1
1.2	Availability of the CBAs.	1
1.3	Where to run the CBAs.	1
2	Finding i-assess	2
3	Starting i-assess	3
4	Practice and Assessed Tests.	5
4.1	Introduction.	5
4.2	Practice Tests.	6
4.2.1	The Main Test Menu.	6
4.2.2	The Question Part Menu.	7
4.2.3	The Input Box and Submit	7
4.2.4	IMPORTANT: Making sure that you submit your answers.	8
4.2.5	Math Display Box.	8
4.2.6	Reset and Editing the Input Box	9
4.2.7	Revealing answers in a Question Part	9
4.2.8	Revealing the Explanation	9
4.2.9	Using Steps to get help	10
4.2.10	Pausing a Test	11
4.3	Leaving a Practice Test	11
4.4	Assessed Tests.	12
4.4.1	Exiting an Assessment.	12
5	Inputting Algebraic Expressions.	14
5.1	Rules for input.	15
5.2	Using Brackets in Algebraic Expressions.	16
5.2.1	Another example	16
6	Glossary of Terms	17

1 Introduction

This document explains how you use the i-assess Tests or CBAs (Computer Based Assessments) as part of your in-course assessment for some of your modules.

1.1 What is i-assess?

I-assess is an electronic assessment system which you will use in two ways.

1. Practice Tests so that you practice for the:
2. Assessed Tests - these form part of the assessment in some modules.

You lecturer will give you details of the CBAs to be attempted as part of your in course assessment.

1.2 Availability of the CBAs.

The Practice Tests will be available at all times except they are not available when the corresponding Assessed Test is to be attempted.

You can do as many Practice Tests as you want when they are available.

A deadline will be set for each Assessed Test after which it will not be available. There will be only one opportunity to do each of the Assessed Tests.

Usually you will do the Practice Test for one week and then you attempt the corresponding Assessed Test the next week with the Practice Tests not available during that time.

1.3 Where to run the CBAs.

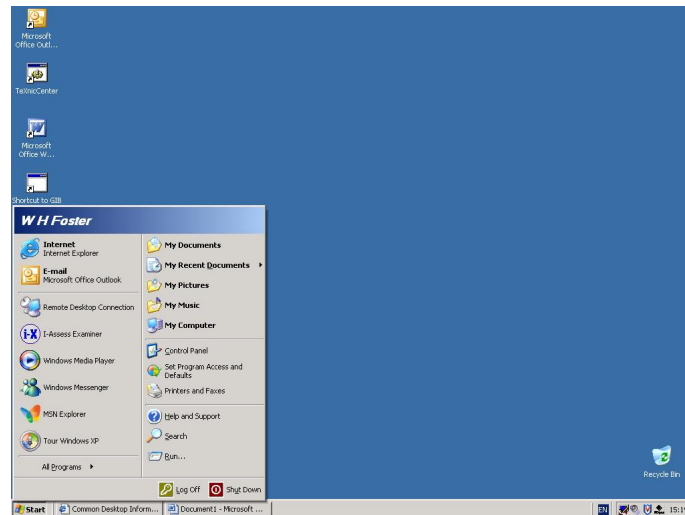
You can do the CBAs on any of the Cluster machines at the University.

They are also available via RAS, this means you can attempt the CBAs anywhere as long as you have broadband available, for example at home or in the halls of residence.

The Student Id you use to log in to the system will be your ISS Id.

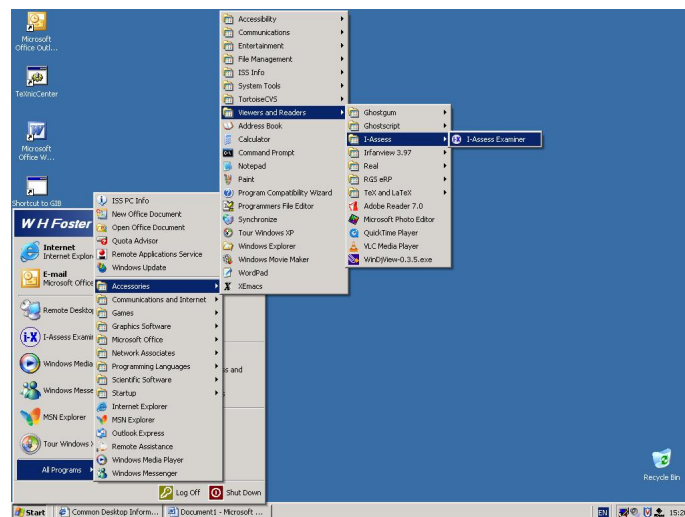
2 Finding i-assess

Click on Start at bottom left:



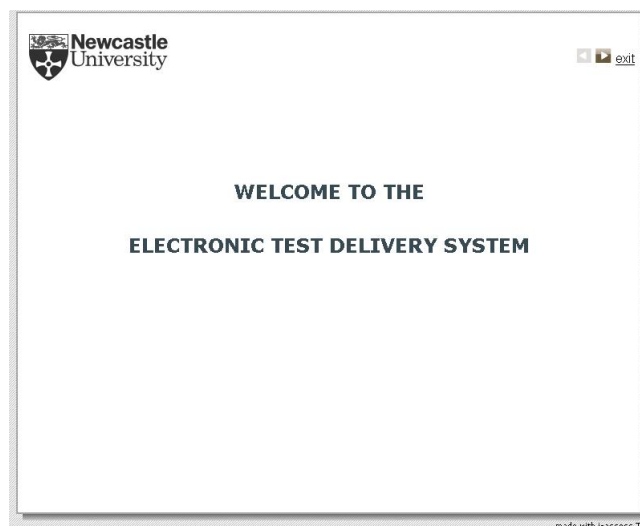
Then select:

All Programs → Accessories → Viewers and Readers → I-assess → I-assess Examiner

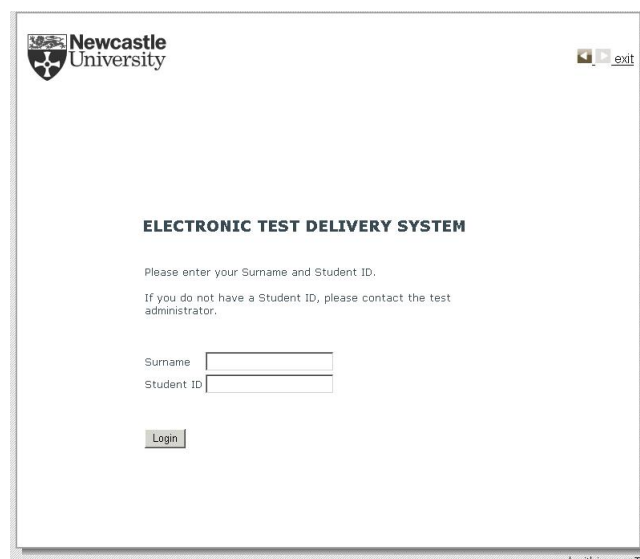


3 Starting i-assess

When you double-click on the i-assess icon you get the following screen:



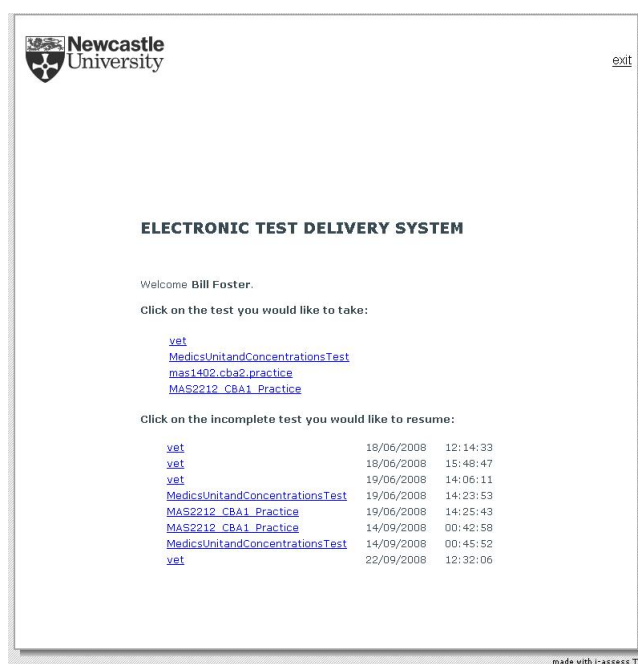
You click on the arrow at the top and the next screen is the log-in screen:

A screenshot of a web application window, similar to the previous one. It features the Newcastle University logo in the top-left and the 'exit' icon in the top-right. The main content area is white and contains the text 'ELECTRONIC TEST DELIVERY SYSTEM'. Below this, there is a prompt: 'Please enter your Surname and Student ID.' followed by a smaller line: 'If you do not have a Student ID, please contact the test administrator.' There are two input fields: the first is labeled 'Surname' and the second is labeled 'Student ID'. Below these fields is a 'Login' button. At the bottom-right corner of the window, there is a small text label 'made with i-assess TM'.

Once you have logged in you see the Tests that have been allocated to you. They will only appear when you can do them.

Note that there are two lists:

1. The upper list is all the Tests you can attempt from the beginning.
2. The lower list is all the Tests you have started and then paused. Note that each such Paused Test has the time of starting beside it. Paused Tests are explained in more detail later.



In this example I have clicked on a Practice Test.

4 Practice and Assessed Tests.

4.1 Introduction.

There are two types of Test; Practice Tests and Assessed Tests.

Practice Tests are available at all times, *EXCEPT* a Practice Test is not available during the time when the corresponding Assessed Test is to be done. When available a Practice Test can be attempted as many times as you like.

Assessed Tests are usually available for one week and you normally have one attempt.

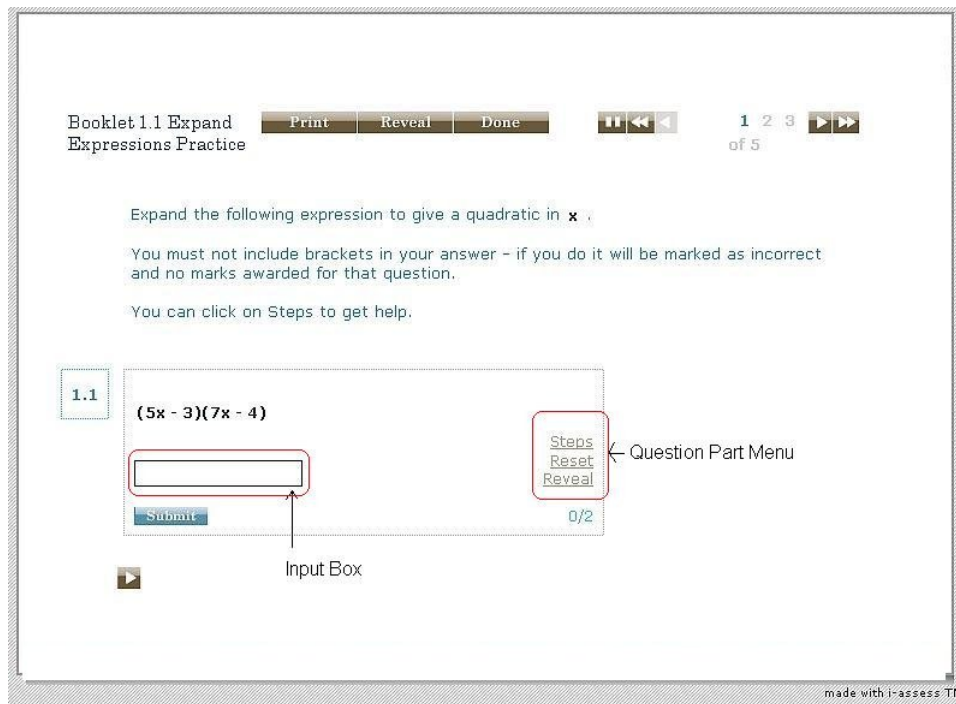
NOTE CAREFULLY THAT YOU DO NOT HAVE THE PRACTICE TEST AVAILABLE WHEN YOU ARE DOING AN ASSESSED TEST.

- Practice Tests allow you to see the full solution to the Test Question whenever you want, and also give you immediate feedback on whether or not your answer is correct. As their name indicates, you use Practice Tests to practice for the important Assessed Tests.
- Assessed Tests are used to monitor your progress through the course and are normally part of your in-course assessment. Assessed Tests do not give you immediate feedback. You see the full solutions to the questions only when you have finished the Test. In contrast to the Practice Tests you are not told if your answers are correct as you do the Test Questions.

4.2 Practice Tests.

The Practice Test we choose to demonstrate is a Practice Test about Algebraic Manipulation.

You see the following:



This Test Question has one Question Part.

4.2.1 The Main Test Menu.

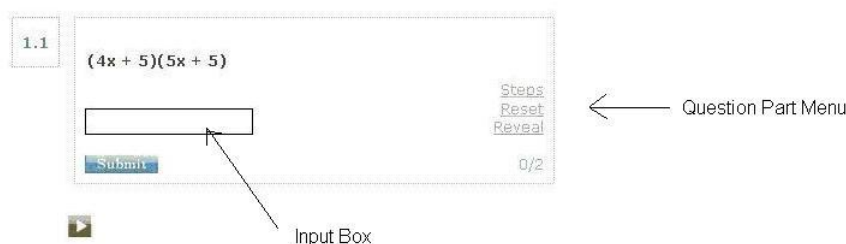


This is at the top of the Test window and has items:

- Print. You can print off the Test Question at any time.
- Reveal. You can see the full solution or Explanation for all of the current Test Question at any time by clicking on this. This is only available in a Practice Test.
- Done. If you want to finish the Test. You are given an opportunity to go back to the Test if this was a mistake. You are also told your percentage mark.

- **Pause.** This button allows you to stop the Test and leave it. You can then come back to it later and continue the Test and Test Question from where you left it, with all your previous work saved.
When you come back to your list of Tests, a previously paused Test is indicated.
- **Navigation buttons** allow you to move between the Test Questions.

4.2.2 The Question Part Menu.



The Question Part Menu contains the following items:

- **Steps:** This is only present if there is help available for the Question Part.
- **Reset:** If you want to change your answer and clear your submitted answer then you click on this.
- **Reveal:** If you want to see the answer or answers to this Question Part. You will not be able to submit your answers after pressing Reveal (as you now know the answer!)

4.2.3 The Input Box and Submit

Each Question Part will usually have one or more Input Boxes. You input your answers in these Boxes as prompted by the questions in the Question Part. In this case you have to input an algebraic expression.

You then click on Submit to store the answer or answers for that Question Part. You can always change your answers and resubmit them at any time before you exit the Test. You are warned if you forget to submit an answer and move on to the next Test Question.

4.2.4 IMPORTANT: Making sure that you submit your answers.

IT IS GOOD PRACTICE TO SUBMIT AN ANSWER IMMEDIATELY AFTER YOU HAVE INPUT IT. You can always change it before you leave the Test.

The following points are very important as you must make sure that you submitted your answers.

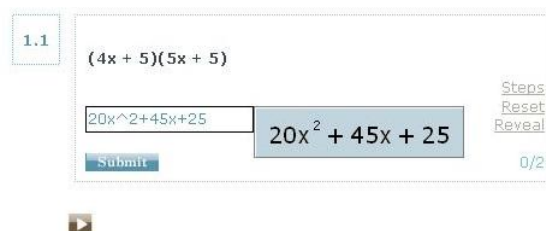
- If you do not submit an answer then it will not be recorded.
- Suppose you answer questions in a Question Part , and do not submit them. If you then submit answers in a different Question Part, the answers in the first Question Part are cleared or reset and you must input them again. Students often forget to do this.
- If you leave a Test Question and you have forgotten to submit one or more answers, then you are warned. You should go back to the Test Question and complete it.

4.2.5 Math Display Box.

For this Question Part you have to enter an algebraic expression, a polynomial involving powers of x .

For more information on entering algebraic expressions see the section on Inputting Algebraic Expressions.

As you enter an expression, you will see a blue box, the Math Display Box, with your input appearing in mathematical notation. In this way you can check that your input is what you expected.



You can then submit your answer and the Math Display Box disappears and the Input Box is now blue.

Note that as the Test is a Practice Test you are told if the answer is correct or not. This answer is correct so a green tick is displayed and 2 marks are awarded.

1.1

$(4x + 5)(5x + 5)$

$20x^2 + 45x + 25$

Submit

Steps
Reset
Reveal

✓ 2/2

4.2.6 Reset and Editing the Input Box

You can clear the Input Box by clicking on Reset in the Question Part Menu.

If you wish to edit your answer without using Reset, click in the Input Box and edit the expression there and then Submit again.

4.2.7 Revealing answers in a Question Part

Clicking on Reveal in the Question Part Menu gives the answers to that Question Part.

Note that you now cannot now submit any more answers for that Question Part.

This reveal is only available in Practice Tests, not in Assessed Tests.

1.1

$(4x + 5)(5x + 5)$

$20x^2 + 45x + 25$

Steps

0/2

4.2.8 Revealing the Explanation

The Reveal in the Question Part Menu gives the answers to the Question Part for a Practice Test. It does not give a full solution, only the answer.

However, you can usually get a more detailed solution or Explanation for all Question Parts of a Test Question if you click on Reveal in the Main Test Menu at the top of the Test window.

Note that this Reveal button is not available in Assessed Tests.

Clicking on Reveal in the Main Test Menu for our example gives the following, which shows how the answer was obtained by expanding the brackets.

Explanation

We have

$$(4x + 5)(5x + 5) = 4x(5x + 5) + 5(5x + 5) = 20x^2 + 20x + 25x + 25 = 20x^2 + 45x + 25$$

on collecting terms.

Expand the following expression to give a quadratic in x .

You must not include brackets in your answer - if you do it will be marked as incorrect and no marks awarded for that question.

You can click on Steps to get help.

1.1

4.2.9 Using Steps to get help

If you click on **Steps** in the Question Part Menu then you are given help via a box opening on the right hand side.

Booklet 1.1 Expand Expressions Practice Print Reveal Done 1 2 3 of 5

Expand the following expression to give a quadratic in x .

You must not include brackets in your answer - if you do it will be marked as incorrect and no marks awarded for that question.

You can click on Steps to get help.

1.1 Done Reset Reveal Submit 0/2

Steps Your answer should be a quadratic in x of the form $ax^2 + bx + c$ where a , b , c are constants. The following is an example which should help you:

$$(x - 1)(2x + 7) = x(2x + 7) - 1(2x + 7) = 2x^2 + 7x - 2x - 7 = 2x^2 + 5x - 7$$

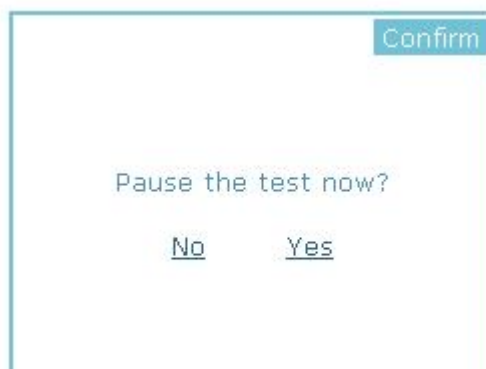
on collecting terms together.

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Click on **Done** in the Question Part Menu (this has replaced **Steps** in this menu) and the **Steps** box disappears.

4.2.10 Pausing a Test

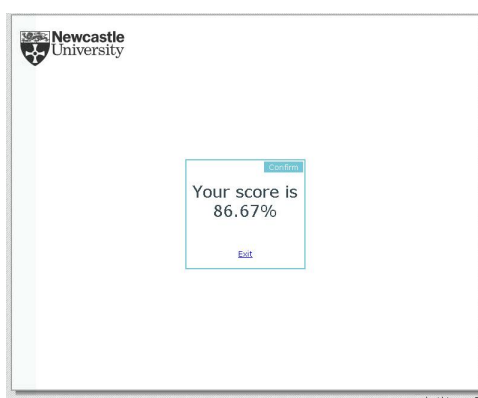
You can pause any Practice or Assessed Test and come back to it later after leaving it. You do this by clicking on the Pause button in the Main Test Menu. You are then asked if you want to Pause:



If you choose to pause then you will see the Paused Test in the list of incomplete Tests when you next use iassess. You can then click on the Test, all of your previous submitted answers are still there and you can continue on from where you left the Test.

4.3 Leaving a Practice Test

You will be asked if you want to leave and if you answer Yes you will be given your mark to 2 decimal places and you then exit.



4.4 Assessed Tests.

The following Test Question is from an Assessed Test which has 9 Test Questions.

Booklet 4 Summative **Print** **Reveal** **Done** 1 2 3 of 9

Express the following combination of logarithms as the logarithm of a fraction or integer.

Your answer should be $\ln(a)$ for a suitable fraction or integer a . You have to find and input a below.

Note that decimals will not be accepted.

1.1 $\ln(4) - 2 \ln(6) + 3 \ln(9) = \ln(a)$

$a = ?$

You can get a hint by clicking on **Steps**.

Submit **Steps** **Reset** 2

- You cannot Reveal the Explanation in the Main Test Menu nor Reveal the answers in a Question Part.
- If you enter an answer in the Input Box and then submit the answer, you are not informed if your answer is correct.
- If Steps is present you can get help.

4.4.1 Exiting an Assessment.

If you click on Done then:

- You are given the choice of going back to the Test or exiting.
- If you choose to exit then you are shown the complete solutions for all the questions in the Test as well as your solutions. Note that you are not allowed to answer any

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Medics Unit and Concentrations Test [Print](#) [Reveal](#) [Done](#) 1 2 3 of 6

Explanation

Length	metre or m
Volume*	L or l
Amount of Substance	mole or mol
Time	second or s
Mass	Kilogram or Kg
Electrical Current	Ampere, ampere or A
Temperature	Kelvin or K

The **International System of Units** (abbreviated SI from the French language name *Système international d'unités*) is the modern form of the metric system. It is the world's most widely used system of units, both in everyday commerce and in science.

1.1 What is the base SI unit and symbol for each of the following variables?:

Length	metre
Volume*	litre
Amount of Substance	mol

questions as you have finished the Test and your mark is now recorded.

- Clicking on Done now gives you a choice to exit or go back to the solutions.
- If you choose to exit you are given your mark and you now click on Exit to finish. Do not forget to click on Exit.

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Confirm

Your score is
19.64%

[Exit](#)

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5 Inputting Algebraic Expressions.

In many questions the answer you are expected to input is an algebraic expression such as $x^2 - 3x + 2$, e^{-2x} , $\frac{x-1}{x^2+1}$, $\ln(x^3 - x + 1)$.

If you have input such expressions into calculators the following should be familiar.

Mathematical Expression.	Input.
x^2	<code>x^2</code>
xy	<code>xy</code> or <code>x*y</code> or <code>x y</code>
Note carefully the next two: $\sin^2(x)$ $\sin(x^2)$	<code>sin(x)^2</code> <code>sin(x^2)</code>
$\sin(x + x^3)$	<code>sin(x+x^3)</code>
$\frac{1-x}{1+x}$	<code>(1-x)/(1+x)</code>
$\frac{5}{1-x} - \frac{3}{2+x}$	<code>5/(1-x)-3/(2+x)</code>
$\frac{1+x^2}{(1-x)(2-x)}$	<code>(1+x^2)/((1-x)(2-x))</code>
e^{-2x}	<code>e^(-2*x)</code> or <code>e^(-2x)</code> or <code>exp(-2*x)</code> or <code>exp(-2x)</code>
\sqrt{x}	<code>sqrt(x)</code> or <code>x^(1/2)</code> or <code>x^(0.5)</code>
$\sqrt{1 + e^{-x^2}} + (1 - x^3)^{-3/2}$	<code>sqrt(1+exp(-x^2))+(1-x^3)^(-3/2)</code>
$\arctan(x)$ or $\tan^{-1}(x)$	<code>arctan(x)</code>
$\tan^{-1}\left(\frac{x+4}{\sqrt{3}}\right)$	<code>arctan((x+4)/sqrt(3))</code>
$\arcsin(x)$ or $\sin^{-1}(x)$	<code>arcsin(x)</code>
$\arccos(x)$ or $\cos^{-1}(x)$	<code>arccos(x)</code>
$ x^2 + y^2 $	<code>abs(x^2+y^2)</code>
$\ln(x^3 - 3x^2 + 2x - 1)$	<code>ln(abs(x^3-3*x^2+2*x-1))</code>

5.1 Rules for input.

1. Powers can be input using `^`.
2. You can input powers of e using `exp` i.e. e^a can be input as `e^a` or `exp(a)`.
3. You can use `*` for multiplication, or you can leave it out, for example $x*y$ and xy are the same. We recommend that you use `*` for multiplication. Also a space between symbols is recognised as multiplication.
4. Powers of trigonometric functions such as $\sin^2(x)$ cannot be directly input. You must input using the equivalent expression `sin(x)^2`.
Note that this is **NOT** the same as $\sin(x^2)$ which is input as `sin(x^2)`.
5. The system recognises all standard functions, but **you must use brackets for the arguments of the functions** e.g. `sin(x)` not `sindx`, `ln(a)` not `lna`.
6. The absolute value function, $|a|$ is input as `abs(a)`.
7. Brackets (Important). You must use brackets when you are inputting the ratio of two algebraic expressions to make sure that you input the correct expression.

5.2 Using Brackets in Algebraic Expressions.

Consider the following expression:

$$\frac{1 - x + x^3}{1 + x}$$

You wish to input this expression into a Test.

The following table shows what can happen if you do not use input brackets properly.

Input into i-assess.	What this means to i-assess.
$(1-x+x^3)/(1+x)$	$\frac{1 - x + x^3}{1 + x}$ (correct.)
$(1-x+x^3)/1+x$	$\frac{1 - x + x^3}{1} + x = 1 + x^3$
$1-x+x^3/(1+x)$	$1 - x + \frac{x^3}{1 + x}$
$1-x+x^3/1+x$	$1 - x + \frac{x^3}{1} + x = 1 + x^3$

As you can see only the first expression is correct and i-assess will mark the rest as incorrect. Better to be safe and use too many brackets than too few!

5.2.1 Another example

The following expression involves the product of two brackets in the denominator.

$$\frac{x^2 + 1}{(1 + x)(1 - x)}$$

You have to be careful with brackets once more.

Input into i-assess.	What this means to i-assess.
$(x^2+1)/((1+x)(1-x))$	$\frac{x^2 + 1}{(1 + x)(1 - x)}$ (correct.)
$(x^2+1)/(1+x)(1-x)$	$\frac{(x^2 + 1)(1 - x)}{1 + x}$
$x^2+1/((1+x)(1-x))$	$x^2 + \frac{1}{(1 + x)(1 - x)}$
$x^2+1/(1+x)(1-x)$	$x^2 + \frac{1 - x}{1 + x}$

6 Glossary of Terms

The following terms occur frequently in this document.

1. *Input Box.*

You input your answers into Input Boxes. Each Question Part may have several Input Boxes.

You submit your answers by clicking on the Submit button associated with an Input Box.

You can change or edit your answer in an Input Box at any time until you leave the Test.

Some Input Boxes require numeric input in the form of a decimal to a given accuracy e.g. to 3 decimal places.

Other Input Boxes require the input of integers or fractions. You will be informed what type of numeric input is required.

Many Input Boxes require the input of algebraic expressions and you must be aware of the correct method of input. See Inputting Algebraic Expressions. However, you are helped by the Math Display Box which displays the mathematical expression in standard mathematical notation as you type your expression.

2. *Math Display Box.*

This displays the mathematical notation equivalent of the expression you are typing into an Input Box. This is particularly useful if you are inputting a complicated mathematical expression, especially one involving powers or ratios of expressions. You can immediately see if you are typing in the expression you intended. It is easy to make mistakes and this gives a valuable check.

3. *Main Test Menu*

Each Test Question has the following menu and navigation items at the top of the Test Question window.

- (a) **Print:** Clicking on this button prints the Test Question as it is displayed. This may include your answers, if submitted and the Explanation, if you have clicked on Reveal for a Practice Test.
- (b) **Reveal:** This is only available for Practice Tests. Clicking on this gives an Explanation or a solution (sometimes a partial solution) for all Question Parts of a Test Question.
- (c) **Done:** You use this button if you wish to quit the Test. The next screen gives you an opportunity to go back to the Test if you wish to.
- (d) **Pause:** You can pause the Test at any time by clicking on this button and come back to it later after quitting i-assess.
- (e) **Navigation:** By clicking on the navigation arrows you can move between Test Questions.

4. *Paused Tests.*

You can pause a Test by clicking on the Pause button in the Main Test Menu, all your submitted answers are stored. You can then come back to the Test at a later time and continue on with your Test.

5. *Practice Tests.*

These Tests allow you to see the full solution to each Test Question at any time. They are useful for practising and gaining confidence in using new mathematical skills as well as preparing for the Assessed Test.

6. *Question Part.*

Each Test Question in a Test can have one or more Question Parts. Each Question Part will usually have one or more questions to be answered. These answers are recorded by you clicking on the Submit button in the Question Part. You must click on the Submit button as otherwise your answers are not recorded for that Question Part.

7. *Question Part Menu*

Each Question Part in a Test has items which you can click on. Practice and Assessed Tests differ as there is less immediate Feedback from Assessed Tests:

(a) *Practice Tests.*

- **Reset:** This is always present. This clears the Input Box and also your submitted answers for that Question Part. You can then input another answer.
- **Reveal:** This is always present. The correct answers to that Question Part are displayed. After you have used Reveal, you cannot submit any more answers to that Question Part.
- **Submit:** This is always present. You click on this to submit your answer or answers within that Question Part. You must always submit your answers as otherwise i-assess will not recognise them. If you move to another Test Question without fully submitting all your answers, i-assess will warn you. You can always go back to a Test Question and change your submitted answers before you leave the Test.
- **Steps:** This is only present if a Question Part includes help or a hint. If you click on this you will see information appearing on the right hand side of the window. The Steps button changes to Done and you click on this to clear the Steps information.
Note that if more than one Question Part of a Test Question has Steps, then it is advisable to have only one Steps window open at a time.
- **Done:** This is only present if Steps has been used. See last item. You click on this to clear the Steps information.

(b) *Assessed Tests.*

These have the Reset, Submit and optionally Steps button available. Reveal is not available.

8. *Reveal a Question Part. (Practice Tests only).*

If you want to see the answers to a Question Part then you click on Reveal in the Question Part Menu.

9. *Reveal an Explanation of a Solution. (Practice Tests only.)*

If you are attempting a Test Question in a Practice Test and you wish to see a full solution or Explanation for that Test Question then click on Reveal in the Main Test Menu. You will usually be given a full Explanation and solution of all Question Parts (although a few Test Questions only have partial solutions).

10. *Assessed Tests.*

An Assessed Test shows you the full solutions to the Test Questions only *after* you have finished the Test.

11. *Test Marks.*

These are the marks given on leaving a Test. All Test Marks are given as percentages to two decimal places.