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Whilst this manual provides help in using 2Simple Maths Games 1,  
we recommend you also watch the videos provided on the CD!

# Introduction

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2

*“Every teacher (and every parent) knows how engaged children become when playing games on computers or games consoles. I wanted to capture this motivation and capacity for learning, and put it into a firm curricular context to develop children’s mathematics.*

*The games are designed to achieve a high pace of learning. As the pupils become engaged and make progress the games will adapt to provide greater challenge. The software can be further personalised to suit individual children.*

*I hope you and your pupils find these games provide an enjoyable and rich learning experience.”*

**- Max Wainwright, Designer & Developer of 2Simple Maths Games 1**

## Network Installation & Technical Information

3

### **Installing 2Simple Maths Games 1**

2Simple Maths Games 1 is designed to work on ALL networks. You can find clear installation instructions on the CD and we provide full support on our website: [www.2simple.com/support](http://www.2simple.com/support)

If you need help with a specific installation, please do not hesitate to contact us via our website or email us at [support@2simple.com](mailto:support@2simple.com)

There is an MSI suitable for Windows 2000 and 2003 servers (with 2000 or XP clients) available on the disk. MSIs for other networks can be provided on request.

As networks differ from one another, we can and will help you when needed. If any of our instructions do not work, please do contact us as we want to provide accurate information and we rely on your feedback to help us get it right.

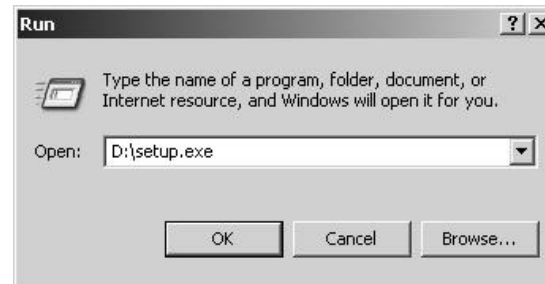
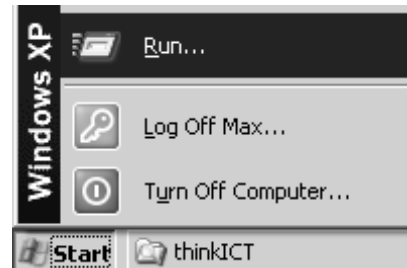
**2Simple Software  
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Fax: (+44) 020 8202 6370**

## Installation for stand-alone machines

4

1. Put the CD in the drive
2. If nothing happens click **'Start - Run'**
3. Type **D:\setup.exe**  
(If your CD drive is drive E  
Type E:\setup.exe etc)
4. Click OK.



5. Follow the instructions on screen to complete the installation.  
***This will install your software & add a link from the 'start menu' to 2Simple Maths Games 1***

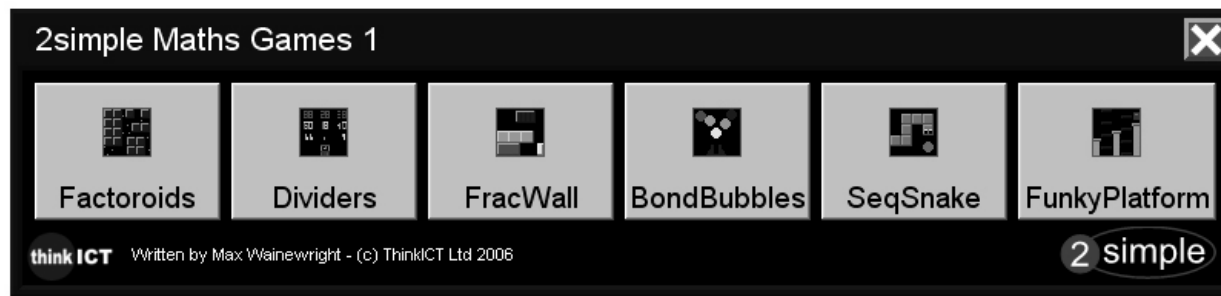
# Getting started

5

1. Click **Start—Programs—2Simple Software—2Simple Maths Games 1**

This will open the Maths Games 1 Launcher.

Open the game you want to play by clicking on the appropriate button.



# Curriculum Links

6
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There are many areas within the new Primary National Strategy Mathematics Framework that are supported by 2Simple Maths Games 1. Most significantly the games enable learners to meet the following learning objective at KS2: **'Secure knowledge of number facts which can be recalled quickly and used and applied appropriately'** .

## Year 3:

- Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100.
- Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts.

## Year 4:

- Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000.
- Identify the doubles of two-digit numbers; use to calculate doubles of multiples of 10 and 100 and derive the corresponding halves.
- Derive and recall multiplication facts up to  $10 \times 10$ , the corresponding division facts and multiples of numbers to 10 up to the tenth multiple.
- Identify pairs of fractions that total 1

## Year 5:

- Recall quickly multiplication facts up to  $10 \times 10$ , use to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts.
- Identify pairs of factors of two-digit whole numbers and find common multiples, e.g. for 6 and 9.

## Year 6:

- Use knowledge of place value and multiplication facts to  $10 \times 10$  to derive related multiplication and division facts involving decimal numbers, e.g.  $0.8 \times 7$ ,  $4.8 \div 6$
- Recognise that prime numbers have only two factors and identify prime numbers less than 100; find the prime factors of two-digit whole numbers.

The software can also be used to support the following KS2 learning objectives: **Use and apply mathematics; Count, compare and order numbers, and describe relationships between them; Calculate efficiently and accurately.**

The games may be adapted to meet other learning objectives (see pages 13-22).

# Factoroids

7

Factorise the Factoroids by firing factors at them. If you are hit by a blue Factoroid you will be destroyed, but if you are hit by a green one you will not.



Use the arrow keys on your keyboard to rotate the calculator.

Fire factors 2 to 9 using the number keys on your keyboard.

Hit the P key to pause the game.



Press the spacebar to activate the calculator's thrust and move it around the screen.

Click to start again

Your score

Click to access Help screen (also doubles as IWB keyboard)

Amount of factors available to use (ensures you don't only use 2s and 3s!)

Lives remaining

Katie: 26

My best: 1 ?

35 5 5

3 3 3 3 4

5

2 simple Factoroids

The screenshot shows the game interface. At the top left, a score indicator shows 'Katie: 26'. At the top right, a 'My best' indicator shows '1 ?'. Below these are several icons: a 'Start again' button, a 'Help screen' button, and a 'Lives remaining' indicator. The main game area features a calculator with a display showing '35' and two '5' factoroids nearby. A stack of factoroids (3, 3, 3, 3, 4) is also visible. The bottom left corner has the text '2 simple Factoroids' and the bottom right corner has a small icon.

# Dividers

8

Divide the numbers before they reach your calculator by firing factors at them.



Use the arrow keys on your keyboard to move your calculator left and right.



Press the spacebar on your keyboard to fire.

Hit the P key to pause the game.



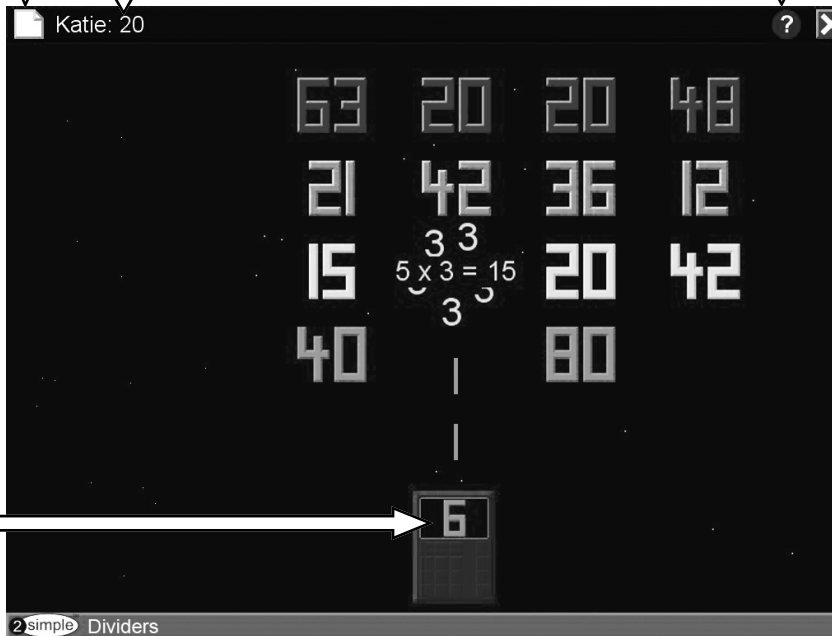
Note: If your current calculator number doesn't go into any of the lowest numbers, you can move the calculator to one side and shoot the number into the air.

Calculator number automatically goes up by 1 after each number fired.

Click to start again

Click to access Help screen (also doubles as IWB keyboard)

Your score



Katie: 20

63	20	20	48
21	42	36	12
15	$5 \times 3 = 15$	20	42
40	3	80	

6

2 simple Dividers



# FracWall

9

Guide the falling fractions as they drop from the top of the screen.

Position fractions so that each row contains one whole.

Use the arrow keys on your keyboard to control the fractions as they fall.

Move left



Move right



Drop quickly



Hit the P key to pause the game.



Click to start again



Your score



Next fraction to fall



Click to access Help screen (also doubles as IWB keyboard)

Completed lines



The screenshot shows the game interface with a grid of fractions. The top bar displays "New level 5 score: 5", "next:  $\frac{1}{3}$ ", and "My best: 83". The grid contains several rows of fractions, with some rows already completed. The bottom left corner shows the logo "2 simple" and "FracWall".

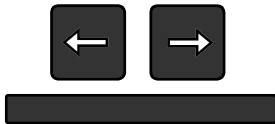
New level 5 score: 5				next: $\frac{1}{3}$	My best: 83
$\frac{1}{12}$	$\frac{2}{6}$	$\frac{2}{12}$	$\frac{1}{3}$		
		$\frac{5}{6}$			
$\frac{1}{3}$		$\frac{5}{6}$			
	$\frac{3}{6}$			$\frac{1}{6}$	
$\frac{2}{6}$			$\frac{1}{3}$		

# BondBubbles

1 0

Aim the bubble blower at another bubble at the top of the screen. If the total of your fired bubble and the one it hits are the target number, the bubbles will fall. Any bubbles underneath will fall too.

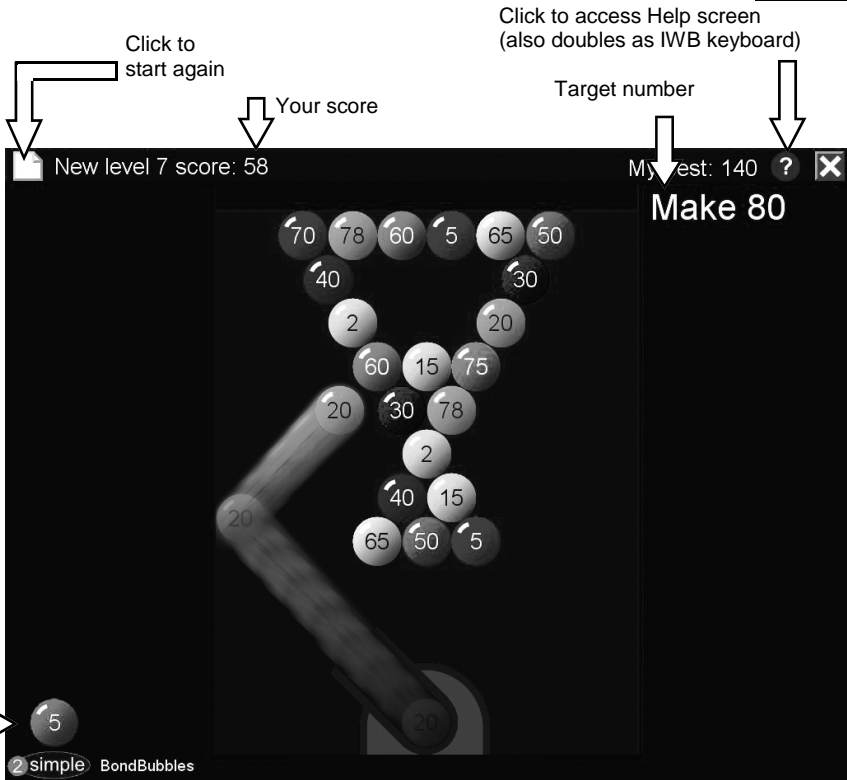
Use the arrow keys on your keyboard to rotate the bubble blower left or right, and hit the spacebar to fire.



Or aim the blower by moving the mouse and click the mouse button to fire.

You'll receive a bonus if you finish the round in as few bonds as possible.

Next bubble



The screenshot shows the game interface with several annotations:

- Click to start again:** An arrow points to a small square icon in the top left corner.
- Your score:** An arrow points to the text "New level 7 score: 58" in the top left.
- Click to access Help screen (also doubles as IWB keyboard):** An arrow points to a question mark icon in the top right.
- Target number:** An arrow points to the text "My best: 140" in the top right.
- Make 80:** The target number for the current level is displayed in large white text on the right side.
- Next bubble:** An arrow points to a bubble with the number "5" at the bottom left of the blower.

The game board features a central bubble blower (a grey arm with a nozzle) and a cluster of bubbles with numbers: 70, 78, 60, 5, 65, 50, 40, 30, 2, 20, 60, 15, 75, 20, 30, 78, 2, 40, 15, 65, 50, 5. The blower is currently aimed at a bubble with the number "20".

At the bottom left, there is a logo for "simple BondBubbles".

# SeqSnake

1 1

Guide the snake around the screen and eat the numbered balls to complete the sequence.

Control the snake using the arrow keys on your keyboard.

Move up  
↑

Move left      Move right  
←                      →

Move down  
↓

Hit the P key to pause the game.  
P

Squares are added to the snake's body to represent the numbers by which the sequence increases.

The sequence to complete

Click to start again

Your score

Click to access Help screen (also doubles as IWB keyboard)

Hit the wrong balls and you will lose points

Lives remaining

Sam: 0      My best 2 ?

9 18 27 36 45 ? ? ? ? ?

66 72 90

93 135 63

54 108 28

17 128 112 81 107

- 1 point

2 simple SeqSnake

# FunkyPlatform

Move your calculator to the target number by jumping on and off the moving platforms.



Use the arrow keys on your keyboard to move your calculator left and right.



Press the spacebar on your keyboard to jump.

Hit the P key to pause the game.

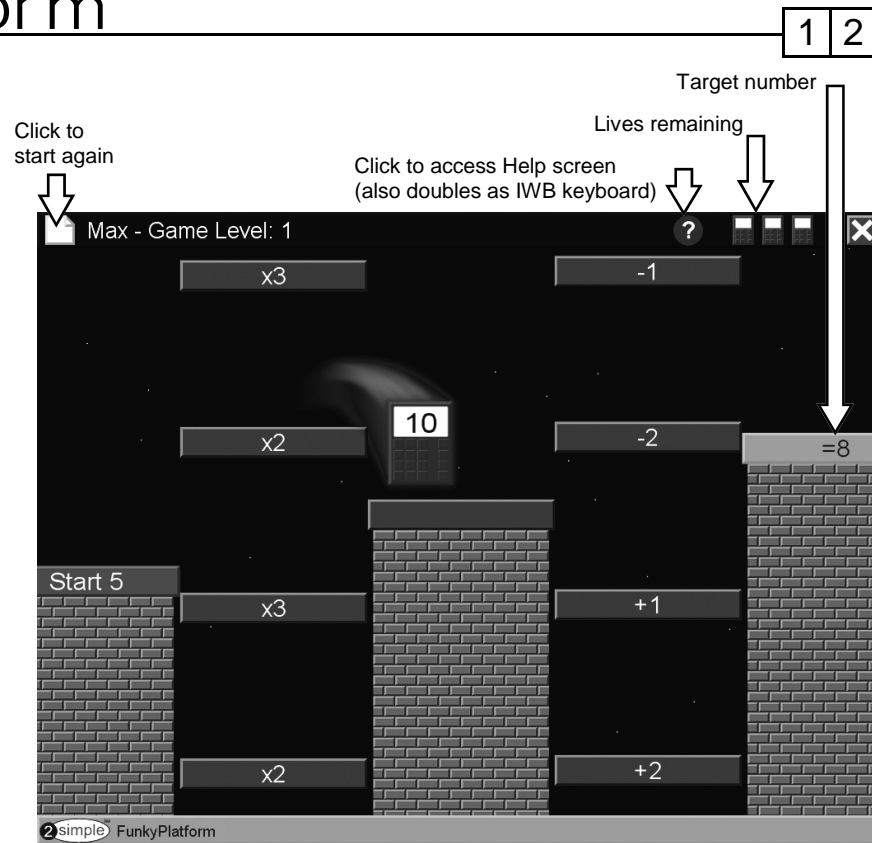


Jump up and down on a moving platform to repeat the operation.

Go back to the start to reset your calculator.

You'll receive a bonus if you finish the round in as few moves as possible.

If you fall to the floor, simply jump back onto a rising platform.



## Personalisation Options - General

1 3

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Please refer to page 21 for details of how these options are saved.

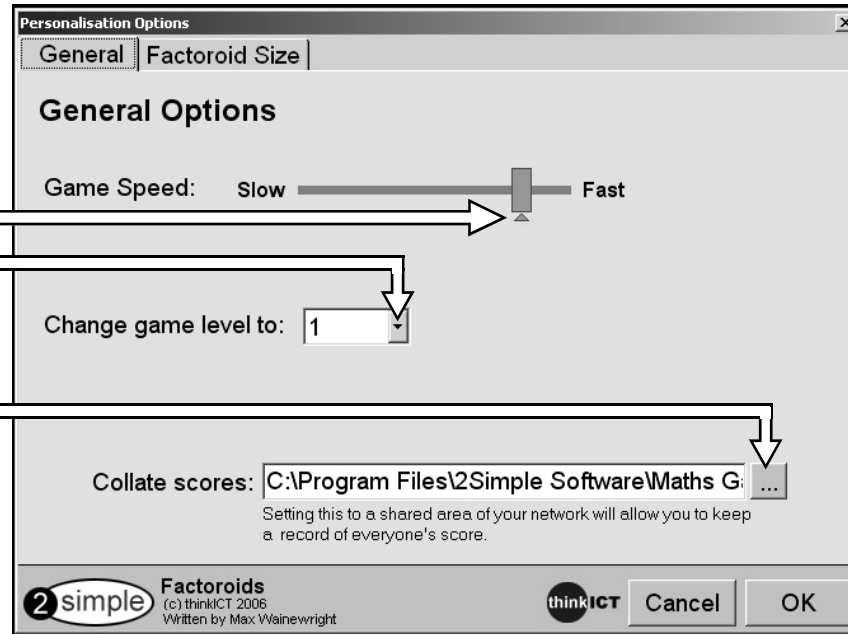
**This screen is  
common to all 6 games**

Slide to change game speed.

Drop-down menu to change  
Game level.

A file named "mdata.csv" will be saved in the location you choose here. Each time anyone plays any of the 6 maths games, an entry will be added to this file. (Make sure everyone has write access to this folder.)

In addition to mdata.csv, a file named **mydata.csv** is stored in the My Documents folder of the logged-in user. This file keeps track of the games played by that user, and remembers the user's game level for next time.



# Personalisation Options - Factoroids

1 4

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Click here to return to General Options.

Click to reset default values

On this screen you can specify the factors that will be available on each level.

If you specify only one number for a level, the program will choose factors around that number to be Factoroids.

Level	Factors Available								Points to go up level
1	4	6	8	9					5
2	12	15	16	18					5
3	20	24	25						10
4	30	35	40						10
5	27	28	32						10
6	21	36	24						10
7	40	45	50						20
8	40	42	45	48	49				20

## Personalisation Options - Dividers

1 5

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Click here to return to General Options.

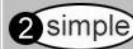
Click to reset default values

On this screen you can specify the number of rows and columns per level.

Lowest and Highest values are used to generate the numbers that you will need to divide.

Calc Max is the highest value the calculator will go to before starting at 2 again.

Level	Rows	Cols	Lowest	Highest	Calc Max
1	3	3	2	8	10
2	3	4	2	8	10
3	4	4	2	10	10
4	4	5	2	10	10
5	4	6	2	12	12
6	5	6	2	12	12
7	0	0	0	0	0
8	0	0	0	0	0



Dividers  
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Written by Max Wainwright



Cancel

OK

# Personalisation Options - FracWall

1 6

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Click here to return to General Options.

Click to reset default values

On this screen you can specify the fractions that will be available on each level.

The fractions must be less than 1. The LCD of the denominators of all fractions in a level is calculated automatically for you, but it cannot be greater than 100.

(LCD = lowest common denominator)

Level	Fractions Available									LCD	Score to go up
1	1/2	1/2	2/4	1/4	1/4	1/4	3/4			8	5
2	1/8	1/4	1/2	1/2	2/4	4/8	1/4	1/4	1/4	16	5
3	1/4	4/16	2/8	1/8	1/16	2/16	1/16	1/2	1/2	16	5
4	1/3	2/3	1/3	1/3	1/3	1/6	1/3	1/6	2/6	12	5
5	1/12	2/12	4/12	1/12	1/12	1/3	2/3	4/12	1/3	12	0
6										0	
7										0	
8										0	

2 simple FracWall  
© thinkICT 2006  
Written by Max Wainwright

thinkICT Cancel OK



# Personalisation Options - BondBubbles

17

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Click here to return to General Options.

Click to reset default values

On this screen you can specify the bubbles that will be available on each level as well as the target total for that level.

For any number that you enter, its pair in grey will automatically be calculated for you.

Level	Total	Numbers Available															
1	20	5	15	5	15	10	10	4	16								
2	30	5	25	10	20	15	15	25	5	10	20	5	25				
3	40	5	35	10	30	15	25	20	20	4	36						
4	50	5	45	10	40	15	35	20	30	25	25	2	48				
5	60	5	55	10	50	15	45	20	40	30	30	2	58				
6	70	5	65	10	60	15	55	20	50	30	40	35	35	5	65		
7	80	5	75	10	70	15	65	20	60	30	50	40	40	4	76		
8	90	5	85	15	75	20	70	30	60	40	50	45	45	5	85		

# Personalisation Options - SeqSnake

1 8

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Click here to return to General Options.

Click to reset default values

The green, blue and purple sets of columns allow you to specify a range of values from which the program will choose a random value in each game.

"Start Value" - number the sequence will start from.

"Step Value" - number that is added to each term in the sequence to get the following term.

"Step Change" - number that the Step Value will change by for each new term in the sequence.

The largest term in the sequence (i.e. the 10<sup>th</sup>) may not exceed 200.

Personalisation Options
✕

General
Sequence Values

Choose the values you want pupils to work with at each level of the game.

Level	Start value		Step value		Step change		Points to go up level
	From	To	From	To	From	To	
1			2	5			10
2			3	10			15
3	1	3	2	5			20
4	1	5	3	7			20
5	1	5	5	10	0	0	20
6	4	9	5	10	0	0	20
7	1	5	1	3	1	2	30
8	5	12	1	5	2	5	0

Reset

2
simple

**SeqSnake**  
(c) thinkICT 2006  
 Written by Max Wainwright

thinkICT

Cancel
OK

# Personalisation Options - FunkyPlatform

1 9

Hold Ctrl and Shift then tap the letter 'O' to display the Personalisation Options.



Click here to return to General Options.

Click to reset default values

On this screen you can specify the operation for each moving platform on each level, as well as the start value range.

Personalisation Options

General Platform values

Choose the operation for each platform. Reset

Level	Starting Value		Platform operation										Score to go up	
	Low	High												
1	2	5	x2	x3	x2	x3	+1	+2	-1	-2				5
2	1	5	x2	x3	x2	x4	+1	-1	+2	+4				5
3	1	8	x2	x3	x2	x3	+1	+2	+3	+4	-1			5
4	20	30	/2	x2	/2	x2	-1	-2	-3	-4	+1			10
5	10	20	x3	x2	x3	x2	-1	-2	-4	/2	+1			10
6	20	30	/2	x2	/2	x2	+2	x2	-2	/2	+1			20
7	1	30	x2	/2	+2	-2	x3	/3	+3	-3	x4			20
8	10	50	x2	x4	x6	x8	x4	/4	+4	-4	x1			0

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thinkICT Cancel OK

## Extra Options for Teachers

2	0
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If you log in as 'Teacher' in Factoroids and FracWall, you can access extra options.

### **In Factoroids:**

Press P to pause the game. You will now be able to manually move any Factoroids on screen. Also, by double-clicking anywhere on screen, you can insert a Factoroid of any value.

### **In FracWall:**

Press P to pause the game. You will now be able to manually move any Fraction on screen.

# Saving Personalisation Options

2 1

As you have seen on previous pages, the settings of each game can be adjusted by pressing ctrl-shift-o. You can edit the specifics of each level, as well as adding or removing your own levels. This is a powerful feature which allows you to customise a game for a year group, class, or even an individual. You can make the settings easier or more difficult, or focus on a particular aspect of mathematics which is being taught.

You can choose to save these settings:

- 1) For all pupils
- 2) For each pupil individually
- 3) For each class / year-group / skill level

## **1) Saving settings for all pupils**

Log in as "Teacher". Any changes you make to the settings will be saved for \*everyone\* on that computer.

## **2) Saving settings for each pupil individually**

Log in as anyone but "Teacher". Any changes you make to the settings will be saved for that person only.

Option (3) continued on next page...

## Saving Personalisation Options - Advanced

2 2

### 3) Saving settings for each class / year-group / skill level

This requires a more in-depth explanation and is more technical - be warned!

The settings for each game are stored as simple text files with the extension ".2ma". There are six files, one for each program, stored where Maths Games is installed (by default C - Program Files - 2Simple Software - Maths Games).

If you use Option 1, logging in as "Teacher", the .2ma file for that program is edited and so settings apply to all.

If you use Option 2, individual logins, an extra .2ma file is created in the My Documents folder of the logged in user.

The .2ma files are associated to the program, so double-clicking on a .2ma file will launch the program it was created in with the settings that have been used. Therefore, having created an extra .2ma file, you can use this to create settings that are shared for everyone in a class or year group as follows:

(This example is for a Year 5 class using Factoroids but applies generally)

- Open Factoroids and log in as "Factoroids-YearGroup5"
- Change the settings to the ones you want to use for the whole year group
- Close the program, go to My Documents, and copy the new "Factoroids-YearGroup5.2ma" file to somewhere all of year 5 have access to.

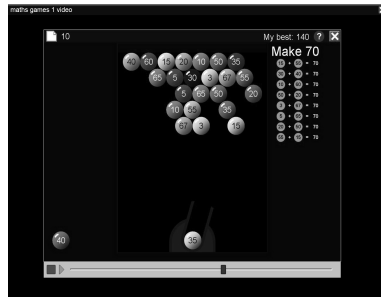
When Year 5 log in, they can just go straight to the .2ma file and launch the program with the settings you've chosen.

## Using the training videos

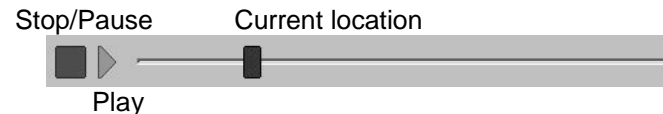
2 3


The CD supplied contains many tutorial videos. If these have been installed then they will be available by clicking Start - Programs - 2Simple Software - Maths Games 1 - videos

In addition to showing you how to use the software, the videos are also designed to give you ideas on how to teach particular concepts and skills.



Once the videos have started playing you will see the program being used. To pause or rewind the video use



 Click on the X at the top right of the screen to exit that video.

### Why not use the videos:

- To introduce the start of an activity in the ICT suite? - As part of an INSET session?
- As a way to remind individual pupils how to do an activity? - To learn more!

# System Requirements

2 4

Operating System: Windows 95 and upwards (95, 98, 98 SE, ME, NT, 2000, XP & Vista)

Processor: Recommended 1GHz +

Memory: Recommended 64MB RAM

Hard Drive: 30MB

Display: Minimum 800x600, 16 bit High Colour. (Recommended 1024 x 768)

CD-ROM Drive Required for Installation

Standard Mouse , Keyboard, Soundcard & speakers

Adobe Reader required to view the user guide (Available on CD-ROM)

If you require further help, please do not hesitate to contact our technical support on  
**(+44)020 8203 1781** or **[www.2Simple.com/support](http://www.2Simple.com/support)**.

We provide free lifetime support for all our programs.



# Copyright Information

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2 5

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**info@2Simple.com**  
**www.2Simple.com**

2Simple Maths Games 1 User Guide - 1st (UK) Edition - Version 002 (May 2006).

## Contacting 2Simple

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2 6

### **You can contact us:**

For general information: **info@2simple.com**

For support issues: [www.2simple.com/support](http://www.2simple.com/support) or email us at: **support@2simple.com**

Tel: (+44) 020 8203 1781

Fax: (+44) 020 8202 6370

### **You can write to us at:**

2Simple Software  
Enterprise House  
2 The Crest  
Hendon, London  
NW4 2HN

### **Faulty Media**

Should the CD-ROM develop a fault we will replace it free of charge.