

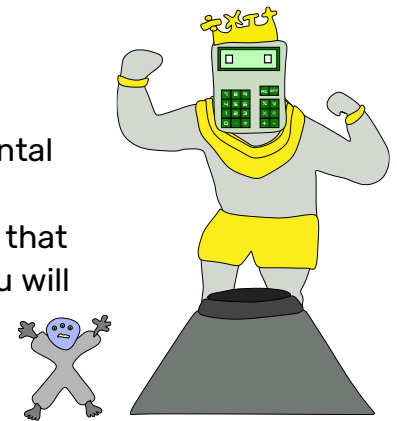
ADAM UP MATHS MASTER

Mastering key mental number skills

Adam Up Maths Master is a series of activities designed to help learners of all abilities and ages understand and recall key mental number skills in a fun and engaging way.

The Story

The evil King Calc is on a rampage to destroy the use of mental mathematics in Numberth. From the top of his tower he is sending signals corrupting people's minds and telling them that they should use calculators ALL THE TIME. To stop him, you will first need to defeat his henchmen, the Multiguys, and in doing so, become a Master. Only then can you take on the King and stop his dastardly ways.



The Tasks

- There are 6 levels of difficulty
- Within each level there are a series of 'Multiguy Tasks' (specific skills) and the 'King Calc Challenge' (a mixture of skills)
- The skills in each level can be found in the 'Log Book' and further below in this document

Believe in yourself and you can do anything.		10 more	10 less	Keep going. You can do it!	
67.1	→		49.0	→	
22.1	→		20.2	→	
19.7	→		29.9	→	
68.7	→		105.4	→	
99.4	→		59.1	→	
8.3	→		32.1	→	
75.4	→		14.2	→	
75.1	→		26.1	→	
35.0	→		99.3	→	
43.5	→		23.9	→	







Multiguy Tasks

Believe in yourself and you can do anything.		King Calc - Level 5								
1 more	4.4	→		1 less	6.3	→				
10 more	4.0	→		10 less	35.9	→				
Bonds to 1	0.9	→	0.8	→	0.6	→				
Double	3.5	→	6.7	→	6.0	→	0.7			
Half	16.4	→	18.2	→	19.2	→	17.3			
Counting up in 0.2s from	→	1								
Counting up in 0.25s from	→	2								
Times tables	10	x	12	=	50%	of	34	=		
	5	x	5	=	25%	of	42	=		
Division	36	÷	4	=	10%	of	25	=		
	7	÷	2	=	0	²	=	9	²	=

King Calc Challenge

At each level, one of the Numbereth characters joins the learner(s) on their quest to become a Master. The Number Crunchers are also there to offer encouragement.



Level 1 - Adam Up 	Level 2 - Millie Metre 	Level 3 - Mila Leeta 	Level 4 - Anne Gull 	Level 5 - Perrie Mata 	Level 6 - Auntie Clockwise 
--	---	---	--	--	---

Delivering Adam Up Maths Master

The programme can be delivered flexibly, although this is the format we recommend:

- 1) The learner has a go at a King Calc Challenge at a level that the teacher thinks would be reasonably challenging.
- 2) The teacher identifies the skills that the learner needs to practice and **teaches** the skills.
- 3) The learner uses the Multiguy Tasks to practice the skill.
- 4) The learner continues to practice until they feel confident enough to try the King Calc Challenge again.
- 5) The learner takes the King Calc challenge and receives a certificate if they defeat him (ie. get all the answers correct).
- 6) The process then repeats at the next level.

IMPORTANT: The answers are hidden. To reveal the answers, select the blank answer boxes and change the font colour to green (or whatever colour you like).


© Adam Up Maths		1 more (up to 5)		© Adam Up Maths		1 more (up to 5)		© Adam Up Maths		1 more (up to 5)	
0	→		0	→		0	→	1	0	→	1
1	→		4	→		1	→	2	4	→	5
2	→		0	→		2	→	3	0	→	1
3	→		1	→		3	→	4	1	→	2
4	→		1	→		4	→	5	1	→	2

Increasing independence


As learners complete each Multiguy Task, the score is recorded in the **log book**. The teacher places a letter by each entry relating to any support used.

Letter	Criteria
S	Completed with support and using concrete materials/pictures
C	Completed the <i>majority</i> independently, using concrete materials / pictures
I	Completed independently without the use concrete materials / pictures

Completing the log book



Adam Up Maths Master
Level 2 Log Book – Millie Metre



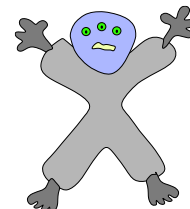
No.	Skill	Score			
1	Writing numbers to 20 in numerals				
2	Writing numbers to 20 in words				
3	1 more (up to 100)				
4	1 less (up to 100)				
5	Number bonds to 10	10/12 I			
6	Doubles to double 5	9/10 I			
7	Halves up to half of 10	15/16 C			
8	Doubles to double 10	14/16 C			
9	Halves up to half of 20				
10	Counting in 2s				
11	Counting in 5s				
12	Counting in 10s				

© Adam Up Maths

The shaded boxes show the skills which the learner can already do – these do not need to be practised.

The score is written each time a learner does a task.

The level of support is written as either 'S', 'C', or 'I'.

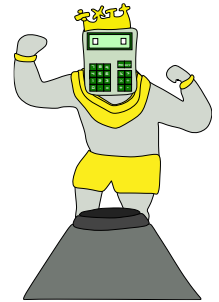


Time

There is no set time limit for the Multiguy Tasks. However, the learner should be encouraged to gradually get faster the more they practice. You may choose to set a time limit for each activity that is appropriate for the learner(s).

Facing King Calc

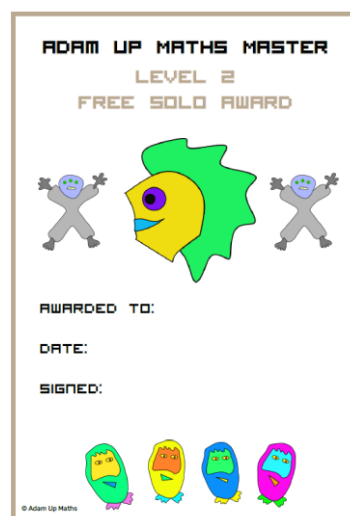
A learner takes on King Calc at the beginning of the learning to see where their gaps are and will re-challenge him when they have practiced enough to defeat him. The intention is for learners to defeat King Calc independently and without the use of supporting equipment. However, we are aware that some learners take much longer to acquire these skills mentally and would therefore use appropriate support to take on King Calc.



Certificates

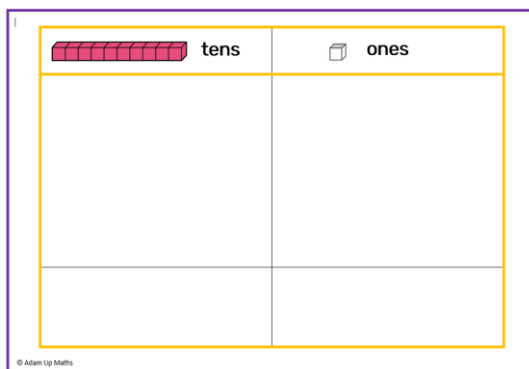
Certificates are awarded for defeating King Calc at each level. They are awarded as follows:

Type of Support	Award
S (adult support)	Team
C (concrete materials)	Solo
I (independent)	Free Solo



Supporting models

Children need to understand the maths they are learning. When starting out with a new skill, models can be used to show what's going on. Recommended models are assigned to each skill in the list below. These can be found in the 'Teacher Zone' on www.adamupmaths.com. Details on which tool to use for each skill can be found below.



Level 1 (Adam Up) skills

Skill	Recommended model to support understanding
Writing numerals to 5	n/a
1 more (up to 5)	5 bar model / Number line 0 to 10
1 less (up to 5)	5 bar model / Number line 0 to 10
Writing numerals to 10	n/a
1 more (up to 10)	10 bar model / Number line 0 to 10
1 less (up to 10)	10 bar model / Number line 0 to 10
Writing numerals 11 - 20	n/a
1 more (up to 20)	100 square / Number line 0 to 20
1 less (up to 20)	100 square / Number line 0 to 20
Number bonds to 5	5 bar model

Level 2 (Millie Metre) skills

Skill	Recommended model to support understanding
Writing numbers to 20 in numerals	n/a
Writing/saying numbers to 20 in words	n/a
1 more (up to 100)	100 square / number line
1 less (up to 100)	100 square / number line
Number bonds to 6	Ten frame
Number bonds to 7	Ten frame
Number bonds to 8	Ten frame
Number bonds to 9	Ten frame
Number bonds to 10	Ten frame
Doubles to double 5	Doubling machine / Ten frame
Halves up to half of 10	Halving machine / Ten frame
Doubles to double 10	Doubling machine / Ten frame
Halves up to half of 20	Halving machine / Ten frame
Counting in 2s	Number line 0 to 20
Counting in 5s	Number line 0 to 100
Counting in 10s	Number line 0 to 100

Level 3 (Mila Leeta) skills

Skill	Recommended model to support understanding
Writing/saying numbers to 100 (words)	n/a
10 more, 10 less (up to 100)	100 square / Place value chart
Steps of 2 (any number up to 100)	100 square
Steps of 5 (any number up to 100)	100 square
Steps of 10 forwards and backwards (up to 100)	100 square
Number bonds to 20	Two ten frames
Addition facts to 10	Two ten frames
Subtraction facts to 10	Two ten frames
Number bonds to 100 (tens)	Number line 0 to 100
Doubles to double 50 (ones digit from 0 to 5)	Doubling machine
Halves up to half of 100 (even numbers where the tens digit is also even)	Halving machine
2x table	Times tables array
5x table	Times tables array
10x table	Times tables array
$\div 2$	Times tables array
$\div 5$	Times tables array
$\div 10$	Times tables array

Level 4 (Anne Gull) skills

Skill	Recommended model to support understanding
Writing numbers to 1,000 (words)	n/a
10 more and 10 less (up to 1,000)	Place value chart
100 more and 100 less (up to 1,000)	Place value chart
Number bonds to 100	100 square / Number line 0 to 100
Addition facts to 20	Two ten frames
Subtraction facts to 20	Two ten frames
Doubles to double 50	Doubling machine
Halves up to half of 100 (even numbers)	Halving machine
Multiples of 20, 50, and 100	Number line – 0 to 100, 0 to 1000
3x table	Times tables array
4x table	Times tables array
8x table	Times tables array
$\div 3$	Times tables array
$\div 4$	Times tables array
$\div 8$	Times tables array

Level 5 (Perrie Mata) skills

Skill	Recommended model to support understanding
100 more and 100 less (up to 10,000)	Place value chart
1,000 more and 1,000 less (up to 10,000)	Place value chart
Number bonds to 1,000	Empty number line 2
Doubles up to 10 (numbers ending in .5)	Doubling machine
Halves up to half of 20 (odd numbers)	Halving machine
Multiples of 25, 50, and 75	Number line 0 to 1000
6x table	Times tables array
7x table	Times tables array
9x table	Times tables array
11x table	Times tables array
12x table	Times tables array
$\div 6$	Times tables array
$\div 7$	Times tables array
$\div 9$	Times tables array
$\div 11$	Times tables array
$\div 12$	Times tables array

Level 6 (Auntie Clockwise) skills

Skill	Recommended model to support understanding
1 more and 1 less (decimals)	Place value chart (decimals)
10 more and 10 less (decimals)	Place value chart (decimals)
Number bonds to 1 (decimals)	Number line 0 to 1
Doubles (decimals to 10)	Doubling machine
Halves (decimals to 10 ending with an even digit)	Halving machine
Multiples of 0.1, 0.2, 0.25, 0.5	Empty number line 2 / 100 square FDP
Times tables mix	Times tables array
Division mix	Times tables array
Division with remainders	Times tables array
50% of a number	Bar model
25% of a number	Bar model
10% of a number	Bar model
Square numbers	Times tables array