New Zealand Curriculum Mathematics Stage 4 Advanced Counting Number and Algebra

PRINTABLE MASTERS



To the teacher

Throughout the Stage 4 Advanced Counting pupil book there are some activities that require students to either copy a diagram or be provided with a printable master of the diagram. In order to reduce the workload of teachers we have included all such diagrams on this CD. This CD supplies all of the printable masters that you need for using the pupil book, including blank tens frames, hundreds boards, place value houses, number lines, number strips, arrow cards, money, paper circles and paper strips.

This CD also includes all of the game boards if you wish to print and laminate your own.

Teachers might also like to laminate some of the activity printable masters so that they can be used with non-permanent markers. These can then be wiped clean and re-used.

Further copies of this CD are available from the publishers at a cost of \$40.00 + GST.



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- 42-46 Arrow cards
- 47-48 Place value houses
- 49 Hundreds board
- 50 Tens frames
- 51-52 Play money
- 53 Circles
- 54 Paper strips
- 55-56 Number strips 0-50 and 50-100
- 57-59 Empty number lines
- 60-61 Number cards
- 62 10 sided die



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Icons



Write down your working and answers.



Work with a partner. Discuss the answers.



Do it by yourself. Then explain to a friend or group what you did.



Make up a word story. Tell it or write it down.



Work in a group.



1 Number tile addition, Clare's school – Activity 2, Did you know?



1 Number tile addition, Sam's sister – Part A



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5 Adding and subtracting with number strips, The Lolly Hut – Activity 2, Part G



5 Adding and subtracting with number strips, On the farm – Activity 3, Did you know? Page 55

	Did you know?						
	Work these out.						
	I 19 + 4 = 23	N 49 + 3 = T 38 + 3 =					
	<mark>\$</mark> 78 – 5 =	U 17 – 4 = B 88 + 4 =					
	C 68 + 4 =	R 43 – 4 = A 47 + 4 =					
	P 56 + 4 =	E 32 – 5 = G 79 + 3 =					
Put the letter beside each question above its answer. The first one has been done for you.							
	$\frac{\mathbf{I}}{60} \frac{\mathbf{I}}{23} \frac{82}{82} \frac{73}{73}$	72 51 52 82 27 41					
	73 13 52 92	13 39 52 41					

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B

5 Adding and subtracting with number strips, All sorts, Part A

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2 Write down the correct answers for the wrong ones.

5 Adding and subtracting with number strips, All sorts, Part A

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All sorts				
B Find the ar	nswers to these subt	ractions.		
1 76 – 4 =	2 54 – 3 =	3 79 – 5 =	4 48 – 2 =	
5 82 – 2 =	6 42 – 4 =	7 63 – 4 =	8 52 – 5 =	
9 78 – 5 =	10 61 – 3 =	11 89 – 5 =	12 93 – 5 =	
13 92 – 3 =	14 72 – 3 =	15 51 – 2 =	16 117 — 5 =	
17 123 – 2 =	18 146 – 5 =	19 127 – 3 =	20 132 – 4 =	

Shade the answers on this grid.

R

50	111	87	123	48	83	125	103	91	68	109
38	67	58	62	72	89	128	81	69	88	59
73	124	51	115	46	142	49	96	114	121	41
74	54	112	42	47	141	80	92	132	84	144
140	97	101	127	43	135	100	82	61	108	123

What word do you find?

6 Adding and subtracting, Black bears – Activity 3, Challenge

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Cł	nallen	ge			
Ma This	Bear has s table giv	4 cubs. /es their height, ag	e and weight.		
ſ	Name	Height (centimetres)	Age (months)	Weight (kilograms)	
	Jet	52		39	
	Taffy			45	Decide if you need to add
	Toto	52	26		or subtract
	Boris				

Use this chart and these clues to find what goes in the spaces.

- 1 Taffy was 5 centimetres taller than Jet.
- 2 Toto weighed 4 kilograms less than Taffy.
- **3** Taffy was was **5** months younger than Toto.
- 4 Jet was 3 months older than Toto.
- **5** Make up some clues for Boris.





6 Adding and subtracting, Lucky drop game



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7 Bigger first, King's Crown game



8 Find the changes, Ten sided dice game



9 Adding and subtracting more than five, The pond game

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11 Adding on tens, Add on a tens number game

21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44
45	46	47	48	49	50	51	52
53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68
69	70	71	72	73	74	75	76
77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92
93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116

12 Subtracting tens, Up and down game

90 - 80	91	92 - 10	<mark>93</mark>	94	95	96	97 - 30	END
<mark>89</mark>	88 - 60	87	86	85	8 4 - 50	83	<mark>82</mark>	81 + 10
72	73 + 20	7 4 - 40	75	76	77 +10	<mark>78</mark>	79 - 70	80
71 - 10	70	69 + 20	68 - 50	67	66 + 10	65	<mark>64</mark>	63 -30
<mark>54</mark>	55	56 + 20	57	<mark>58</mark>	59 - 10	60	61	62 + 10
53 + 30	<mark>52</mark>	51	50 - 30	Ц9	48 - 30	47	46	Ц <u>5</u> + 10
36	37 - 10	38 - 20	39	40	41	42 + 30	43	ЦЦ + 20
35 + 20	<mark>34</mark>	33	<u>32</u>	31	30 - 20	29 +20	<mark>28</mark>	27
18	19 - 10	20	21 + 20	<mark>22</mark>	<mark>23</mark>	24 +10	25 - 10	<mark>2</mark> 6
17	16 +10	15	14 -10	13	12 +10	11 -10	10	9
START	1	2	3 + 10	ų	5	6	7	<mark>8</mark> + 20

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13 Adding and subtracting practice, What is it?

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13 Adding and subtracting practice, Number chains and trains, Part A

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13 Adding and subtracting practice, Spider webs

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Spider webs 🚿

In these spider webs the middle number is the sum of the two outer numbers.

Find the missing numbers.



13 Adding and subtracting practice, Three in a row game

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15 Fractions of shapes, Halves, Challenge

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15 Fractions of shapes, Quarters — Challenge





15 Fractions of shapes, Quarters — Challenge



15 Fractions of shapes, Thirds – Challenge





15 Fractions of shapes, All mixed up, Part B



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Number Knowledge E Ordering numbers up to 100 and beyond Find the biggest – Activity 12, Part C

Page 169



What picture do you get?

Number Knowledge K Addition facts to 10, Two or three make ten game Page 194



Number Knowledge K Addition facts to 10, Three in a row game

Page 195

Ŋ	0	Ŋ	Ţ
	00	9	00
00	4	Ţ	0
Q	Ŋ	9	4
~	O	00	Ţ
Ţ	Ŋ	9	0

Number Knowledge L Ten and ..., Ten and... game

Page 197



Number Knowledge M Groups that make 20, Learning the facts – Activity 30, Part C

Page 203



Baxter wants to find the flag.

C

Number Knowledge N Doubles and halves, Double me game

Page 206

Double	Halve	Double	Double	Double	Halve
5	14	10	8	1	4
Helve	Halve	Double	Halve	Halve	Double
8	20	2	12	8	8
Halve	Double	Halve	Double	Double	Double
6	6	18	4	7	3
Double	Double	Helve	Double	Double	Helve
10	ô	10		ô	12
Double	Helve	Double	Halve	Helve	Double
8	20	7	14	16	5
Halve	Halve	Halve	Double	Double	Halve
10	12	2	8	10	2
Double	Double	Halve	Halve	Halve	Double
	7	16	16	16	4
T'R'S	Halve 4	Double 1	Double	Halve 18	End

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Number Knowledge N Doubles and halves, Double trouble – Activity 32, Parts A and B Page 207

Activity 32

A Did you know...?

Solve these problems.

Т	Double 6 = 12	Α	Double 5	В	Double 8
Ν	Double 9	Ι	Double 7	R	Half of 12
S	Half of 16	0	Half of 14	W	Half of 18
С	Double 1	Ε	Half of 8		
н	Double 2 then add 1	L	Double 5 then add 1		
U	Double 8 then subtract 1	Y	Halve 20 then add 3		

Put the letter beside each question above its answer. The first one has been done for you.



B Find the hidden animal

Find the answers to these.

1 Double 6	2 Half of 18	3 Half of 16	4 Double 8
5 Double 7	6 Half of 20	7 Half of 10	8 Double 9
9 Half of 6	10 Double 2		

Shade **all** the squares on the grid that contain the answers. There is more than one square to shade for each answer.

2	20	7	2	1	9	19	17	15	2	1
7	6	11	15	2	6	6	2	1	6	7
11	3	14	9	11	8	13	12	4	5	13
6	8	15	18	2	10	1	9	20	12	19
7	10	4	5	6	5	6	5	18	10	15
1	12	6	11	15	17	20	19	1	14	6
13	8	15	11	6	1	7	12	16	3	2

What animal do you find?

Number Knowledge O Adding to 20, Family of facts – Activity 33 Page 208

Activity 33

Fill in the missing family members.



Number Knowledge O Adding to 20, Family of facts – Activity 33 Page 209

Activity 33

Fill in the missing family members.



Number Knowledge O Adding to 20, Subtraction machine game

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Number Knowledge O Adding to 20, Addition squares – Activity 36 Page 216

Activity 36

1

Fill in the missing numbers on these squares.

+	7	4	5
8			
10			
9			



3	+	8	7	6
	6			
	12			
	11			

+	8	6	9
5			
11			
7			

Challenge

1 Fill in the blank squares with numbers that will make the additions true.

4

- 2 Try and find another way to fill in the blank squares?
- 3 Show your answers to your friends. Have they found any different ways?

+		
	12	15
	14	

+		
	12	15
	14	

Number Knowledge O Adding to 20, Bingo game grids

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Number Knowledge O Adding to 20, Bingo game Subtraction and addition boards

Subtraction boards

	Board	1	E	Board 2		Во	ard 3	
19 – 5	13 – 6	16 – 7	12 – 5	15 – 9	19 – 3	14 – 8	19 – 4	17 – 6
15 – 7	20 - 4	14 – 8	17 – 4	20 - 5	19 – 1	13 – 5	18 - 4	15 – 8
18 – 3	20 – 1	19 – 6	20 – 3	16 – 4	12 – 7	19 – 9	20 – 0	17 – 5
18 – 7	19 – 2	17 – 7	17 – 8	16 – 8	20 – 10	15 – 6	18 – 2	14 – 9
13 – 8	18 – 6	20 – 2	19 – 8	18 – 4	20 – 0	18 – 1	18 – 5	20 – 2

Addition boards

Board 1

2 + 3	5 + 7	6 + 4
9 + 7	3 + 3	4 + 4
10 + 7	2 + 7	8+6
5 + 6	7 + 8	13 + 4
9+9	6 + 7	12 + 8

Board 2

8 + 8

12 + 8

8 + 5

5 + 3

5 + 2

9 + 8

9 + 6

7 + 7

5 + 1

8 + 3

11 + 7

13 + 6

6 + 3

5 + 5

6 + 6

Board 3

5 + 9	2 + 6	9 + 4
4 + 8	4 + 2	7 + 9
1+6	7 + 4	5 + 4
12 + 6	5 + 0	4 + 11
14 + 5	3 + 7	12 + 8

Number Knowledge O Adding to 20, Three makes 10 or 20 – Activity 37, Part C

Page 220

0		9	4	0	2
M	H	2		9	00
00	ß	7	Ŋ	00	Ħ
2	7	0		3	9
9	Ŋ	=	3	Ŋ	2
00	3		Ŧ	7	0

Number Knowledge P Adding to a hundred with tens, Add it on game

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Number Knowledge P Adding to a hundred with tens, Add or subtract? – Activity 40 Page 225

Activity 40



Choose a list each.

Race each other to find the answers. Swap lists and race again.



B Did you know...?

Work these out.



Put the letter beside each question above its answer. The first one has been done for you.



Number Knowledge Q Fractions, Top and bottom numbers – Activity 43 Page 230

and

Activity 43

Mr Gray has 4 paddocks the same size.





one into quarters					

one into thirds.					

- 1 Shade three parts of each diagram.
- 2 What fraction of each have you shaded? Write this as a fraction symbol.
- **3** What do you notice about the top number of each fraction?







- 4 What do you notice about the bottom number?
- **5** What do you notice about the fractions you wrote and the size of the piece you shaded?

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Number Knowledge Q Fractions, Shade it – Activity 44, Parts A, B, C and D

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🕥 Activity 44



- 2 What fraction is not shaded?
- B 1 Shade $\frac{1}{4}$ of these shapes.
 - 2 What fraction is not shaded?



D 1 Shade $\frac{1}{5}$ of each shape.



2 What fraction is not shaded?











Hundreds	Tens	Ones

Hundreds	Tens	Ones

Hundreds	Tens	Ones

Hundreds	Tens	Ones

Hundreds	Tens	Ones			
			47		

Thousands	Hundreds	Tens	Ones

Thousands	Hundreds	Tens	Ones

Thousands	Hundreds	Tens	Ones

Thousands	Hundreds	Tens	Ones

Thousands	Hundreds	Tens	Ones

Hundreds board

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

		50

\$1 coins





































































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Paper strips Cut along dotted lines. I

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Number strips Cut along the dotted lines and join to make a continuous number strip

10	20	30	40	50
6	19	29	39	49
œ	18	28	38	Ч8
7	17	27	37	ц7
9	16	26	36	Ч6
Ŋ	15	25	35	45
Ŧ	14	24	34	τη
m	13	23	33	Ч3
7	12	22	32	Ч2
-	11	21	31	ц1

Number strips Cut along the dotted lines and join to make a continuous number strip

60	70	80	06	100
59	69	62	89	66
28	68	78	88	98
57	67	77	87	97
56	66	76	86	96
22	65	75	85	95
54	64	74	84	94
53	63	73	83	93
52	62	72	82	92
51	61	71	81	91

Empty number lines

-01	6	-0	-0	-6
- o	- o	- o	- o	- o
- ∞	- ∞	- ∞	- ∞	- ∞
- ~				
- v	Q -	o –	o –	و –
- IJ	- N	- r0	<u>-</u> го	- v
- +				- +
- m	- m	- m	- m	- m
- 0				- N

Empty number lines

					Back
20	50	20	20	20	20
- 6	- 6	- 6	- 6	- 6	19 - 1
<u>– 8</u>	- 8	- 18	- 20	- 8	<u>∞</u> –
- 1	- 1	11 –	- 1	17	1 - 1
- 1	- 16	16	- 6	16 - 1	16 - 16
13	15	15	13	15	15
– ≓	⊢ ≓	1	- ≠	⊢ ₹	- ≓
<u>– </u>	13 –	13 – 1	13 –	13 –	<u>1</u> – 1
2 -	- 12	- 12	- 12	12 -	2 -
= -	= -	7 - 7	= -	= -	= -
6	<u> </u>	-01 10	9	6	6
م	6	- o	6	o –	o – ا
⊢∞	<u>−</u> ∞	− ∞	→ ∞	− ∞	∞ ⊣∣
- ~		- ~	- r	- r	- ~
و –	0 -	و –	و	e –	و _
<u>م</u>	Qu —	רי −− ער	<u>си —</u>	Cr —	<u>с</u> и — Г
	- =	- =	- =	⊢ ≠	⊢ ≠
—	- m	-	— ო	—	— ო
				⊢	~ ~

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