## 00 Number Milestones: Solving problems involving multiplication and division MATHS

DVENTORES 6								
NZC Early Level 1	NZC Level 1	NZC Early Level 2	NZC Level 2	NZC Early Level 3	NZC Level 3	NZC Early Level 4	NZC Level 4	NZC Level
Year 1: 5 -6 year olds	Year 2: 6 -7 year olds	Year 3: 7 -8 year olds	Year 4: 8 -9 year olds	Year 5: 9 -10 year olds	Year 6: 10 -11 year olds	Year 7: 11 -12 year olds	Year 8: 12 -13 year olds	Year 9/10: 14+ year
Numeracy Stage 1/2/3	Numeracy Stage 4	Numeracy Early Stage 5	Numeracy Stage 5	Numeracy Early Stage 6	Numeracy Stage o	Numeracy Early Stage 7	Numeracy Stage 7	Numeracy Stage
<b>Counting</b> Solve problems inv	olving groups the same size, equ	al sharing and counting				Each level is a one-year wide band of	f learning aligned to The New Zealand (	Curriculum.
Counting from one numbers up to 10, then up to 20	Counting on and counting back numbers up to and from 100					that level, even if it is at the beginnin	g of the level and not all aspects have b	be working at been mastered.
•	Skip counting		<b>姜姜姜姜</b>			Within each level the understanding	knowledge and skills also progress. The	e size of numbe
	in tens up to 100 in fives up to 50 Io Io		***			and the complexity of problems incre equipment decreases.	ease, while the amount of support provi	ided and use of
	in twos up to 20							
	0 10 20	so 40 <u>~</u>				10 6 (0,r/0 /0,r6		
<b>a</b> .: <b>a</b> .:	Multiplying whole numbe	ers Solve problems using part-w	hole thinking, place value underst	anding, multiplicative thinking, n	umber facts — 🗌 🗐 🔐	<i>IO IOO 60</i>	478	
orting objects into groups	an an an an	1-digit x2, x5, x10	2-digit x2, x5, x10	2-digit x 1-digit	3-digit x 1-digit	2-digit x 2-digit 2 2×10 20 2.6 12	3-digit x 2-digit $\frac{x \times 20}{2868}$	Any whole
Equal sharing	ling and ling and ling	e.g. x10, x5, x2 facts, repeated addition	2 groups of 26 is 14 x 5 = [	$[ ] 13 \times 7 = [ ] 5 \times 24 = 10 \times [ ]$	3 groups of 234 is $199 \times 4 = [ ]$	$16 \times 12 = [ ]$ 43 groups of 15 is	. 478 groups of 26 is $+7580$	-
one at a time $\rightarrow$ more than one at a	time $\rightarrow$ sharing 'tens' and 'ones'	Fingers on 5 hands? 8 \$10 notes			$\begin{array}{c} 200 \times 3 \\ 234 \times 3 \xrightarrow{2} 30 \times 3 \\ 234 \times 3 \xrightarrow{2} 100 \times 3 \\ 200 $	43 × 15	use efficient strategies #	
		$6 \text{ groups of } 2 \text{ is } \dots \text{ / } x \text{ 5 = } [ ]$	445		4×3	43×10 43×5	100 groups of 375 = 3,750	-
			so 70			430 40×5 3×15	99 groups of 375 = 3,750-375	5
	Dividing whole numbers	Solve problems using part-whole	e thinking, place value understand	ling, multiplicative thinking, numb	per facts	200 15		
		÷2, ÷5, ÷10	2-digit ÷10, ÷5, ÷2	2-digit ÷ 1-digit	3-digit ÷ 1-digit	3-digit ÷ 2-digit	4-digit ÷ 3-digit	Any whole number
		e.g. ÷10 facts, repeated subtraction	Share \$64 evenly between 2 people	48 into groups of 8 68 ÷ 3 = [_] 8 x [_] = 48 3 x [_] = 68	138 ÷ 6 = [_] 6 x [_] = 138 3 x [_] = 100	135 ÷ 15 = [_] 440 ÷ 23 = [_]	8,190 ÷ 252 = [ _ ]	
		Share 14 coins into 2 groups,	$65 \div 5 = [_]$ How many groups of 5 in 65?	with no remainder and with remaine	der as a number	with remainder as a fraction	with remainder as a	decimal
		how many in each group?	10 groups of 5 = 50 $(5/6)$ (5/6)	48 24 24	Multiplying and dividing.	desimple and interare		
		how many groups?	<u></u>	12 12 12 12   6 6 6 6 6 6	Solve problems using part-who	le thinking, place value, multiplicat	ive thinking, number facts	
		\$50 shared between 10 people,			1-digit x tenth	2-digit x tenth 1-digit ÷ tenth	2-digit x tenth & hundredth	Any decimal
		how much do they get each?	5 <b>50 15</b> ĐĐ ĐĐ	88 88	6 x 0.4 = [_] 5 x [_] = 2.5	tenth x tenth	1-digit & tenth x 1-digit & tenth	
					18 x 0.7 = [_] 0.6 x 0.8 = [_] 6 ÷ 0.4 = []	$2^{-\text{digit}} \neq \text{term}^{-1}$ 23 x 0.25 = [ ] 2.6 x 1.8 = [ ]		
					0.4 0.4 0.4 0.4 0.4 0.4	5 jumps 5 jumps 5 jumps	x and ÷ negative integers	Any integer
						0 4 0 5 12 16 2 4 6	7 x 4 = [] 15 ÷ [] = 3	, .
	Multinlying and dividing	fractions Salva problems by fir	ding fractions of numbers using r	art-whole thinking fractional ad	ditive multiplicative and propertie	anal thinking number facts		
	Halves of groups of objects	Halves and quarters of objects	Halves and quarters of objects	Find $\frac{1}{2}$ of 2 4 6 8 10	One half one third one quarters	Halves thirds quarters fifths tenths	Fractions with denominators to 10	Fractions of
	and lengths	lengths, area and numbers up to 20	areas, lengths and numbers	$\frac{1}{3}$ of 3, 6, 9, 12, 15	of numbers up to 100	of numbers up to 100	of any whole number	any whole
	<i>b</i>	Find half of 14 coins.	(multiples of 2, 5, 10)	$\frac{1}{4}$ of 4, 8, 12, 16, 20 $\frac{1}{5}$ of 5, 10, 15, 20, 25	$\frac{1}{2} \times 27 = [$ _]	$1\frac{3}{10}$ of 50 is $\frac{4}{5}x[-] = 20$	$\frac{3}{7} \times 63 = [\ ] \qquad 1\frac{2}{9} \text{ of } 36$	number
		How long is half of this rope?	One quarter of 60 is $\int \frac{1}{2} \times 60 = \begin{bmatrix} 1 \\ 1 \end{bmatrix}$	One fifth of 15 is $\frac{1}{2} \times 15 = [$	3	10 0	, , ,	
		Share these 3 rods between you			Calus and blance be multiply in a	for the last for the second second	19 - 14	
				Where is $\frac{1}{4}$ of the way to the finish from the start?	Solve problems by multiplying a	a fraction by a fraction using multip		••••
			Cut $\frac{3}{4}$ off this length 80cm	stort	Multiply any fraction by one hair	fraction with denominators to 10	with denominators to 10	any fractions
				Finish	$\frac{1}{2} \times \frac{2}{3} = [$ ] Half of 2 thirds	$\frac{1}{4} \times \frac{2}{3} = [\ ]$	$\frac{4}{7} \times \frac{2}{3} = [\ ]$	
						Solve problems by dividing a fra	ction by a fraction	
				-	Divide numbers and halves by half	Divide any fraction by one half	Divide	
						How many halves in $3\frac{1}{2}$ ?	How many halves in $\frac{3}{4}$ ? $\frac{3}{4} \div \frac{1}{2} = [-]$	any fraction
Inderstandings, knowledge	and skills underpinning mathe	ematical thinking and problem	solving					
Read, write, count, model, order	r, estimate, rounding	0	Ŭ					
lumbers up to 10, then up to 20	Numbers up to 100	Numbers up to 1,000	Numbers up to 10,000	Numbers up to 1,000,000	'thousands', 'millions', 'billions'	Any whole numbers		
Representing mutiplication and	division using arrays, grids, objec	cts and length models						
Place value 'ten and'	'tens' and 'ones'	'hundreds', 'tens' and 'ones'	'thousands', 'hundreds', 'tens', 'ones'	'ones', 'tens', 'hundreds' of thousands	Numbers with 'tenths'	Numbers with 'tenths', 'hundredths	Any decimal number	
Basic Facts	Skip count in tens, fives and twos	x10 x5 x2 multiplication and	x10 x5 x2 multiplication and	Up to 10 x 10 multiplication and	Up to 10 x 10 multiplication and	Up to 12 x 12 multiplication	Add, subtract, multiply, divide	Add, subtrac
		divición tacto pocifit ristra actor	ANUCION FACTO COORDO (CENTE LINE		A THE REAL PROPERTY AND A THE REAL PROPERTY AND A THE ALL			
Sorting, equal sharing, describin Sort and share one at a time, then m	ng same and different nore than one Sort and share 'tens' a	and 'ones' Sort and share 'hundreds',	('tens' and 'ones'	division facts, result unknown	division facts, change/start unknown			manipiy, an

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