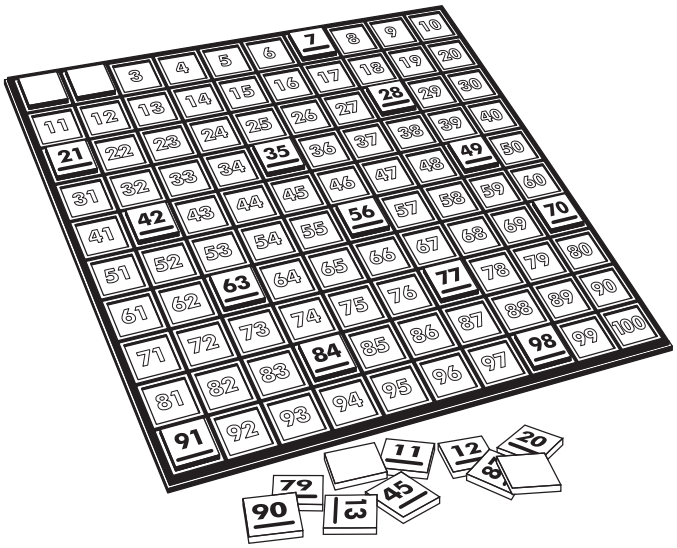
100 NUMBER BOARD

INVICTA EDUCATION

MATHEMATICS
UNDERSTANDING NUMBERS

PRODUCT GUIDE

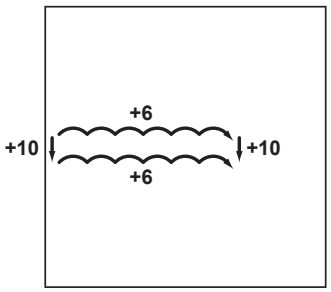
IP 013359



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

The moulded board has a bordered and marked grid consisting of 100 recessed and clearly numbered squares. Associated with the board are 100 clearly numbered tablets and 25 coloured tablets each one inch square.
Together these provide a very direct and versatile aid to understanding, and illustrate or strengthen concepts, making learning facts and processes more meaningful by their active use.
The following uses highlight the versatility of the apparatus by showing some useful and interesting applications.

Initial exercises with the 100 Number Board are based on a child's ability to identify a specific number on a tablet and to be able to match the tablet to it's position on the board.
Counting on and back along the rows from any number will allow children to understand number sequence. Movement up and down the columns illustrates addition and subtraction of tens.



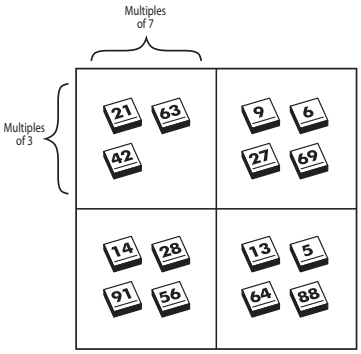
Addition and subtraction facts are fascinating studies using the 100 Number Board. When considering, for example, 41 + 16, two basic routes can be shown;
a) 41 + 10 + 6, which becomes 51 + 6 = 57
b) 41 + 6 + 10, which becomes 47 + 10 = 57
Other possible routes could be 41 + 20 - 4 = 57 or 61 - 4 = 57 or where the addend 16 is split into additive pairs, i.e. 7 + 9.
Subtraction is a reversing of these processes and can be deduced from these methods.
Tables of multiples may be built up on the 100 Number Board. When building up a table, such as the multiples of 4, either place the appropriate number tablets onto the board or use the coloured tablets to replace number tablets from the board. As the board is numbered up to 100, the child goes well beyond the product 4 x 9. Each table of multiples has a different pattern on the Number Board.

1	2	3		5	6	7		9	10
11		13	14	15		17	18	19	
21	22	23		25	26	27		29	30
31		33	34	35		37	38	39	
41	42	43		45	46	47		49	50
51		53	54	55		57	58	59	
61	62	63		65	66	67		69	70
71		73	74	75		77	78	79	
81	82	83		85	86	87		89	90
91		93	94	95		97	98	99	

1	2		4	5			8		10
11		13			16	17		19	20
	22	23		25	26			29	
31	32		34			37	38		40
41		43	44		46	47			50
	52	53		55			58	59	
61	62		64	65		67	68		
71		73	74		76			79	80
	82	83		85	86		88	89	
	92		94	95		97			100

This pattern illustrates a superimposition of the factor patterns for 3 and 7. Use the coloured tablets for the 7 pattern and reverse the number tablets for the 3 pattern. Obviously those squares having two tablets are numbers which are divisible by 3 and 7, i.e. belong to both sets of numbers.

The tablets can also be sorted using Venn or Carroll diagrams as shown in this illustration. Obviously not all the tablets have been used in this Carroll diagram.

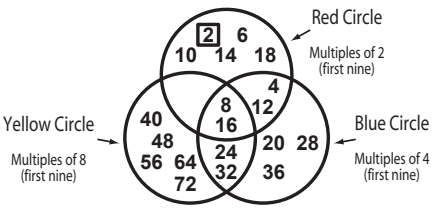


Related sets of multiples have elements in common. For example, the sets of the first nine multiples of 2, 4 and 8 have the multiples { 8, 16 } common to all three sets, the multiples { 4, 8, 12, 16 } common to the sets of multiples of 2 and 4 and the multiples { 8, 16, 24, 32 } common to the sets of multiples of 4 and 8.

First nine multiples of 2: { 2, 4, 6, 8, 10, 12, 14, 16, 18 }

First nine multiples of 4: { 4, 8, 12, 16, 20, 24, 28, 32, 36 }

First nine multiples of 8: { 8, 16, 24, 32, 40, 48, 56, 64, 72 }



We may represent the same relationships in Venn diagram form.
By reversing all the multiples of 2 - except 2 - and then using the same rule with multiples of 3, 5, 7, this pattern emerges.

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