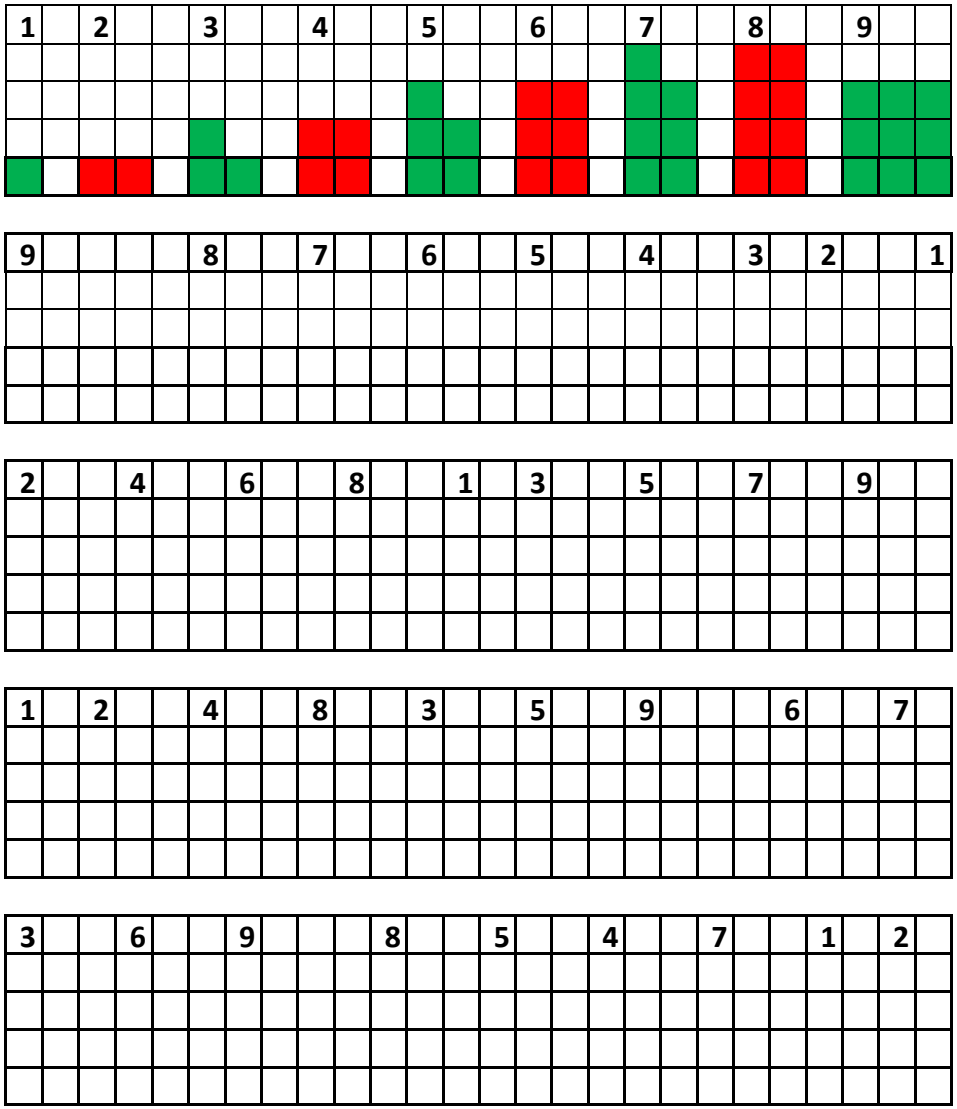
Count & Color Squares, Odd & Even

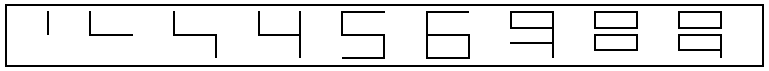


Migrant Math 01

From Sticks to Icons

IIII → 4 → 4 → FOUR

Many sticks can be arranged in a row of for example four ones.
Four ones can be rearranged to 1 icon with four sticks.
Written sloppy, the icon becomes a digit.
Icons are created for all numbers until ten.
Ten, eleven, twelve etc. has no icon because we count in tens.
Ten is counted as 1 bundle and no unbundles, ten = 10
Eleven is counted as 1 bundle and 1 unbundled, eleven = 11
Twelve is counted as 1 bundle and 2 unbundled, twelve = 12
In Danish, eleven and twelve means one left and two left, understood that a bundle has already been counted.
Six, seven, eight may also be counted as Bundle less 4, B-3, B-2 etc.



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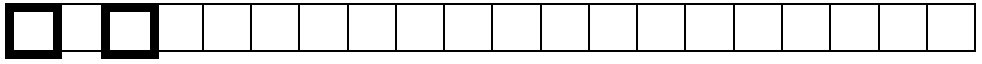
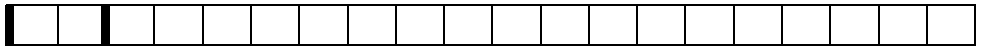
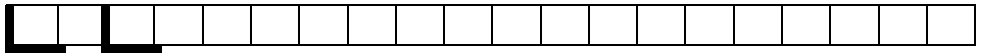
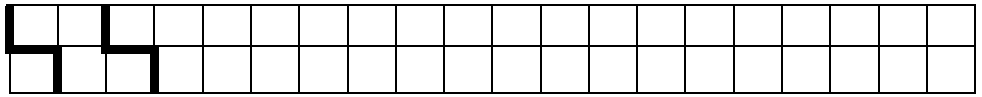
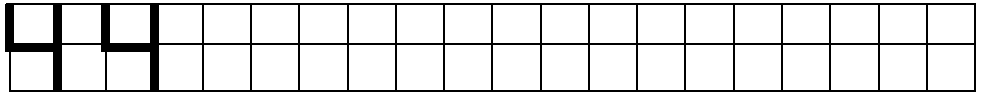
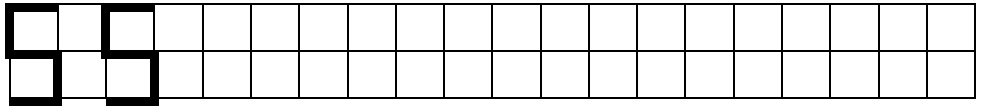
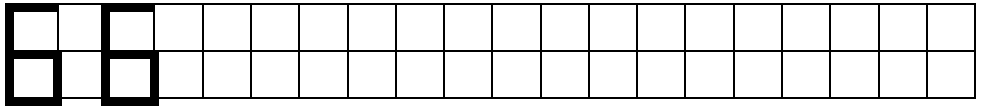
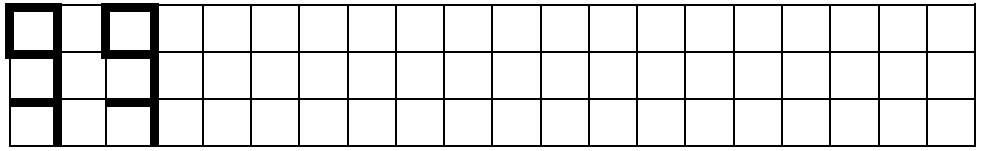
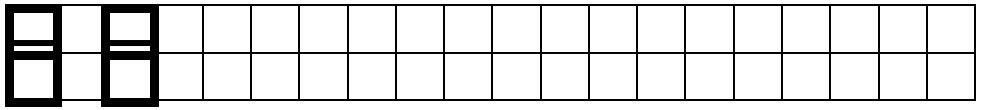
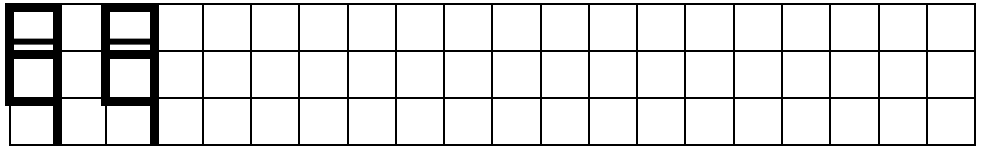
Job	Do
	
I	
II	
III	
IIII	
IIIII	
IIIII I	
IIIII II	
IIIII III	
IIIII IIII	

Write & Say	
0	Zero
1	One
2	Two
3	Three
4	Four
5	Five
6	Six or B less 4
7	Seven or B-3
8	Eight or B-2
9	Nine or B-1
10	Bundle or Ten
11	B1 or Ten1
12	B2 or Ten2
13	B3 or Ten3
14	B4 or Ten4
15	B5 or Ten5
16	B6 or Ten6 or 2B-4

Job		Do	Calculator
2 7s in 5s	Line Count Bundle Stack B-write Answer		 2*7 2*7
2 6s in 5s	Line Count Bundle Stack B-write Answer		 2*6 2*6
2 6s in 4s	Line Count Bundle Stack B-write Answer		 2*6 2*6
2 6s in 3s	Line Count Bundle Stack B-write Answer		 2*6 2*6
2 5s in 4s	Line Count Bundle Stack B-write Answer		 5 5

Migrant Math 06

ReCount in a new Unit

T = 3 **5s** = ? **6s**

Once counted in one unit, a total T can be recounted in another unit.
A total of 3 **5s** can be recounted in **6s** as in chapter 04
- by lining, counting, bundling, stacking, bundle-writing and answering
- by asking a calculator to predict the result using two formulas:

The ReCount formula **T = (T/B)*B** saying that 'from T, T/B times Bs can be taken away'
The ReStack formula **T = (T–B)+B** saying that 'from T, T–B is left when B is placed next to'.

To change a unit is also called **proportionality**.

Calculator prediction:

3*5/6	2.some
3*5 – 2*6	3

Answer: T = 3 5s = 2.3 **6s**

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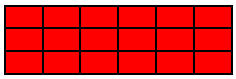
06. ReCount in a New Unit

Job		Do	Calculator
2 9s in 6s	Line Count Bundle Stack B-write Answer	T = I I I I I I I I I I I I I I I I I I 1, 2, 3, 4, B, 1B1, 1B2, 1B3, 1B4, …, **3B** T = 𝍸 𝍸 𝍸  T = 3**B** T = 2 9s = 3 6s	2*9/6 3 2*9 – 3*6 0
2 9s in 5s	Line Count Bundle Stack B-write Answer		2*9/ 2*9 –
2 8s in 6s	Line Count Bundle Stack B-write Answer		2*8 2*8
2 8s in 5s	Line Count Bundle Stack B-write Answer		2*8 2*8
2 7s in 6s	Line Count Bundle Stack B-write Answer		2*7 2*7

Job		Do	Calculator
7 **in 2s**	B-write Ans.	T = 7 = 3**B**1 = 1**BB**1**B**1 T = 7 = 3.1 **2s** = 11.1 **2s**	7/2 3.some 7 – 3*2 1
9 **in 2s**	B-write Ans.	T = 9 = 4**B**1 = 1**BB**2**B**1 = 2**BB**0**B**1 = 1**BBB**0**B**0**B**1 T = 9 = 4.1 **2s** = 12.1 2s = 20.1 **2s** = 100.1 **2s**	9/2 4.some 9 – 4*2 1
3 4s **in 2s**	B-write Ans.		
3 5s **in 2s**	B-write Ans.		
5 4s **in 2s**	B-write Ans.		
4 7s **in 3s**	B-write Ans.		
4 8s **in 3s**	B-write Ans.		
4 9s **in 3s**	B-write Ans.		
5 7s **in 3s**	B-write Ans.		
5 8s **in 3s**	B-write Ans.		
5 9s **in 3s**	B-write Ans.		
6 8s **in 3s**	B-write Ans.		
7 8s **in 3s**	B-write Ans.		

Migrant Math 07

ReCount in BundleBundles

T = 9.3 **5s** = 9**B**3 **5s** = 1**BB**4**B**3 **5s** = 14.3 **5s**

An overload in a bundle creates a bundles-of-bundles.
Counting a total T of 6 **8s** in **5s** gives T = 9.3 5s.
However, with 5 as the bundle-size, 5 bundles can be recounted as 1 bundle-of-bundles of **5s** so that
T = 6 **8s** = 9.3 **5s** = 14.3 **5s**.

Calculator prediction:

6*8/5	9.some
6*8 – 9*5	3

9/5	1.some
9 – 1*5	4

Answer: T = 6 **8s** = 9.3 **5s** = 14.3 **5s**

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07. Recount in BundleBundles

Job		Do	Calculator
4 8s in 5s	B-write Answer	T = 4 **8s** = 6**B**2 = 1**BB**1**B**2 T = 4 **8s** = 6.2 **5s** = 11.2 **5s** = 12.-3 **5s**	4*8/5 6.some 4*8 – 6*5 2
5 8s in 6s	B-write Answer		
6 9s in 7s	B-write Answer		
9 9s in 8s	B-write Answer		
3 9s in 4s	B-write Answer		
4 5s in 3s	B-write Answer		
6 8s in 5s	B-write Answer		
6 8s in 4s	B-write Answer		
7 8s in 5s	B-write Answer		
7 8s in 4s	B-write Answer		
8 8s in 5s	B-write Answer		
8 8s in 4s	B-write Answer		

Job		Do	Calculator
253 in 7s	B-write Ans.	T = 2**B**5**B**3 = 25**B**3 = 21**B**43 = 21**B**42 + 1 T = 3**B**6 * 7 + 1 = 36 * 7 + 1 = <u>36 1/7 **7s**</u>	253/7 36.some 253 – 36*7 1
253 in 9s	B-write Ans.		
253 in 5s	B-write Ans.		
253 in 3s	B-write Ans.		
842 in 7s	B-write Ans.		
842 in 5s	B-write Ans.		
842 in 4s	B-write Ans.		
842 in 2s	B-write Ans.		
904 in 8s	B-write Ans.		
904 in 7s	B-write Ans.		
904 in 5s	B-write Ans.		
904 in 3s	B-write Ans.		
789 in 8s	B-write Ans.		
789 in 5s	B-write Ans.		
789 in 4s	B-write Ans.		

Migrant Math 09

ReCount from Tens

T = 3 **tens** = ? **7s**

A total of 3 **tens** can be recounted in **7s** as in chapter 06

- by lining (we shorten with Roman numbers as icons), counting, bundling, stacking, bundle-writing and answering

- by asking a calculator to predict the result using the two formulas

Calculator prediction:

30/7	4.some
30 – 4*7	2

Answer: T = 3 **tens** = 4.2 **7s** = <u>4 2/7 **7s**</u> *(fraction form)*

Recounting large numbers from tens, we save time using a multiplication table. So to recount a total T of 253 in 7s we use bundle-writing to create an overload guided by the table:

T = 253 = 25**B**3 = 21**B**43 = 21**B** 42 +1 = 3**B**6 *7 +1

T = 253 = 36 **7s** + 1 = 36 1/7 **7s**.

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09. Recount From Tens

Job		Do	Calculator
37 in 9s	Line ReBundle B-write Answer	X X X V II 9I 9I 9I V II -> 9 9 9 X -> 9 9 9 9 1 3**B** 7 = **B**37 = **B**36 + 1 = **B**4*9 + 1 T = 37 = 4*9 + 1 = 4.1 **9s** = 4 1/9 **9s**	37/9 4.some 37 – 4*9 1
37 in 7s	Line ReBundle B-write Answer		
37 in 5s	Line ReBundle B-write Answer		
42 in 7s	Line ReBundle B-write Answer		
42 in 5s	Line ReBundle B-write Answer		
26 in 7s	Line ReBundle B-write Answer		
26 in 5s	Line ReBundle B-write Answer		

Job		Do	Calculator
17 43s	B-write Ans.	T = 17 * 4**B**3 = 68**B**51 = 73**B**1 = 731 T = 17 **43s** = 73.1 **tens** = 731	17*43 731
27 43s	B-write Ans.		
37 43s	B-write Ans.		
47 43s	B-write Ans.		
57 43s	B-write Ans.		
67 43s	B-write Ans.		
77 43s	B-write Ans.		
87 43s	B-write Ans.		
32 243s	B-write Ans.	T = 32 * 2**B**4**B**3 = 64**B**128**B**96 = 64**B**137**B**6 = 77**B**7**B**6 = 777.6 **tens** = 7776	32*243 7776
35 413s	B-write Ans.		
43 343s	B-write Ans.		
56 453s	B-write Ans.		
62 637s	B-write Ans.		
74 843s	B-write Ans.		
87 543s	B-write Ans.		
92 493s	B-write Ans.		

Migrant Math 10

ReCount Large Numbers in Tens

T = 7 **43s** = 7*43 = 7*4**B**3 = 28**B**21 = 30**B**1 = 301

To reCount large numbers in Tens, bundle-writing is used to create an overload, later to be removed to get the final answer.

To recount 7 **43s** in tens gives a total

T = 7 **43s** = 7*43 = 7*4**B**3 = 28**B**21 = 30**B**1 = 301 = 30.1 **tens**

This makes sense: Shrinking the width of the stack from 43 to ten means increasing the height to keep the same total.

Calculator prediction:

7*43	301

Answer: T = 3 **8s** = 24 = 2.4 **tens**

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10. Recount Large Numbers in Tens

Job		Do	Calculator
7 43s	B-write Answer	T = 7 * 4**B**3 = 28**B**21 = 30**B**1 = 301 T = 7 **43s** = 30.1 **tens** = 301	7*43 301
8 43s	B-write Answer		
9 43s	B-write Answer		
6 43s	B-write Answer		
5 62s	B-write Answer		
4 62s	B-write Answer		
3 62s	B-write Answer		
2 62s	B-write Answer		
27 436s	B-write Answer		
3 436s	B-write Answer		
4 436s	B-write Answer		
5 436s	B-write Answer		
6 436s	B-write Answer		
7 436s	B-write Answer		
8 436s	B-write Answer		