Sense of Number
Visual Calculation Policy

Expanded Edition for
Toner Avenue Primary School
March 2015

Graphic Design by Dave Godfrey
Compiled by the Sense of Number Maths Team

For sole use within Toner Avenue Primary School.

'A picture is worth 1000 words!'
www.senseofnumber.co.uk

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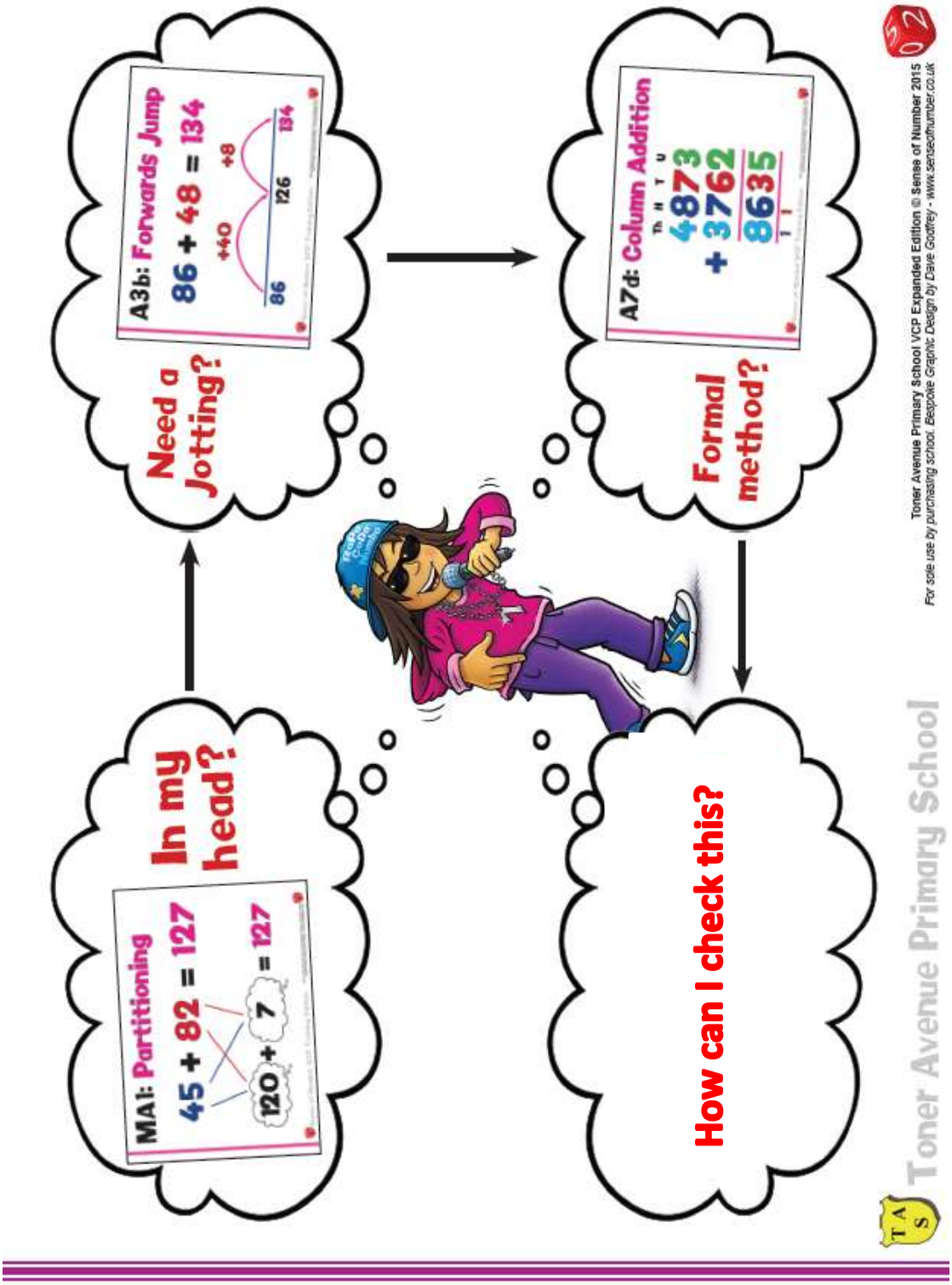
We want our pupils to make decisions. We help our pupils make choices to be fast and efficient at maths.



This is how we can ask and answer our questions.

KC1: Key Concepts!

Addition

+

8 + 2 = 10

"What is 8 add 2?"
Answer: 10

Subtraction

−

8 - 2 = 6

"What is 8 subtract 2?"
Answer: 6
"The difference between 8 and 2 is 6"

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KC2: Key Concepts!

Multiplication

x

8 x 2 = 16

"8 multiplied by 2" means "8, 2 times" or "2 groups of 8"

Division

÷

8 ÷ 2 = 4

"8 divided by 2" means "How many groups of 2 are there in 8?" Answer: 4

("8 shared into 2 sets is 4")

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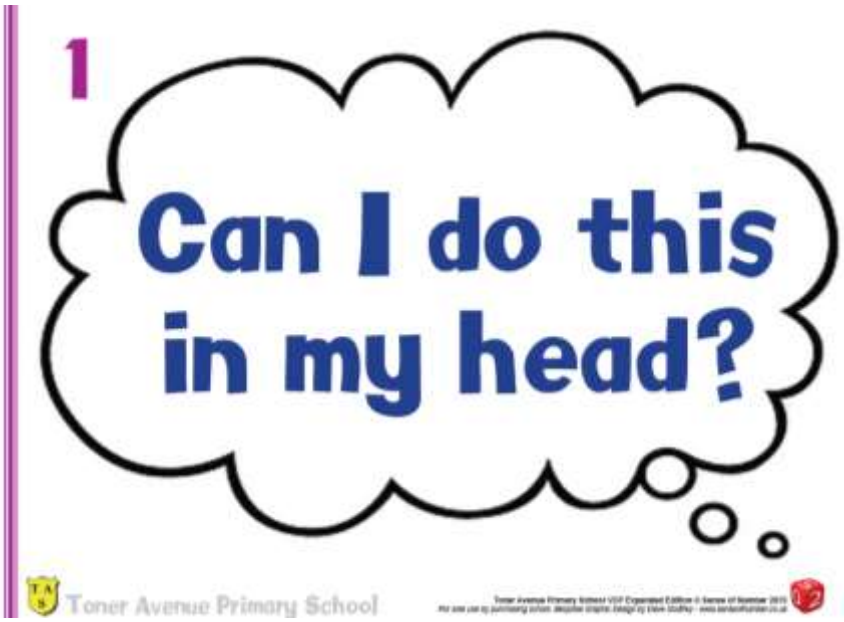
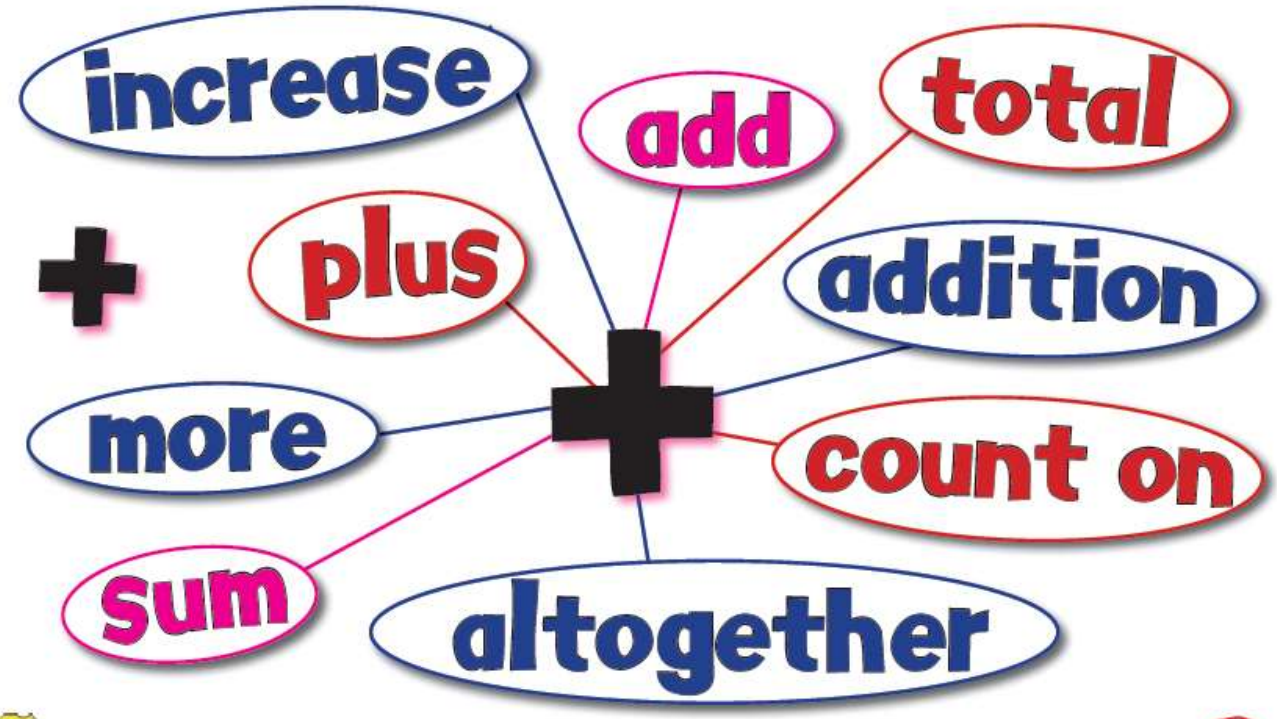
Before we answer questions, this is what we consider.



Addition Vocabulary



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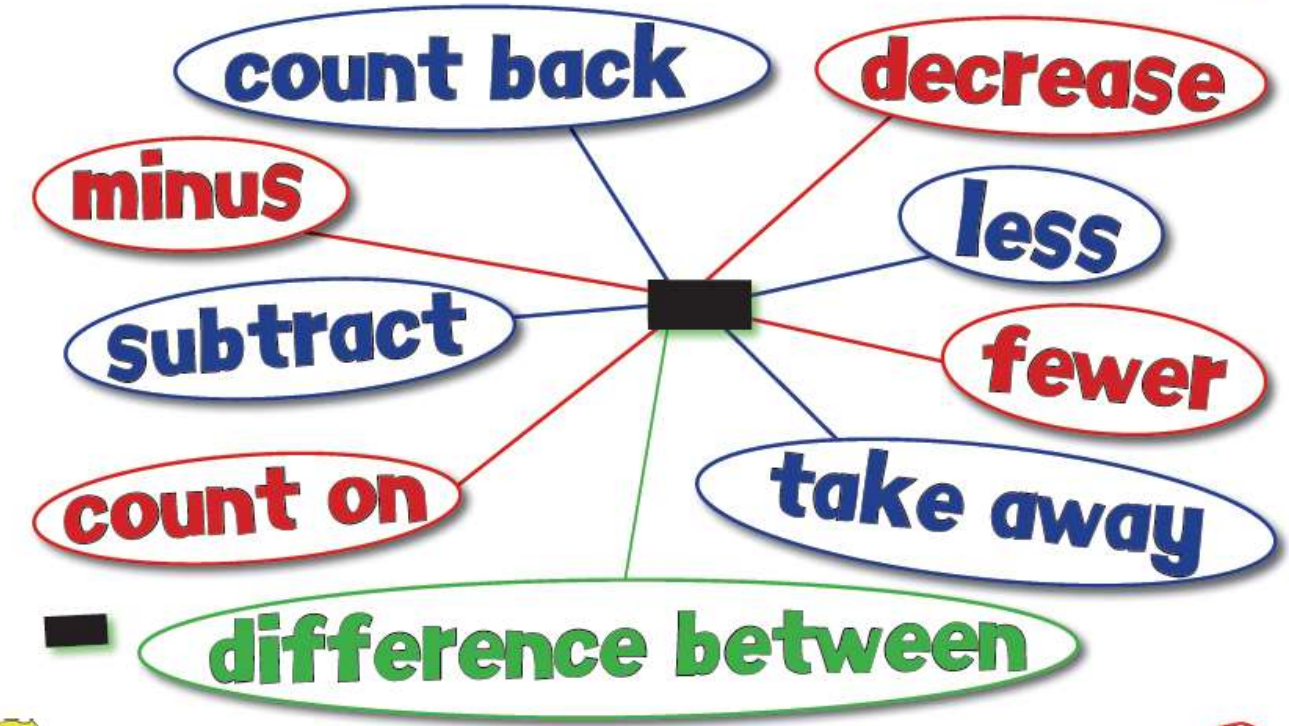
Subtraction Vocabulary



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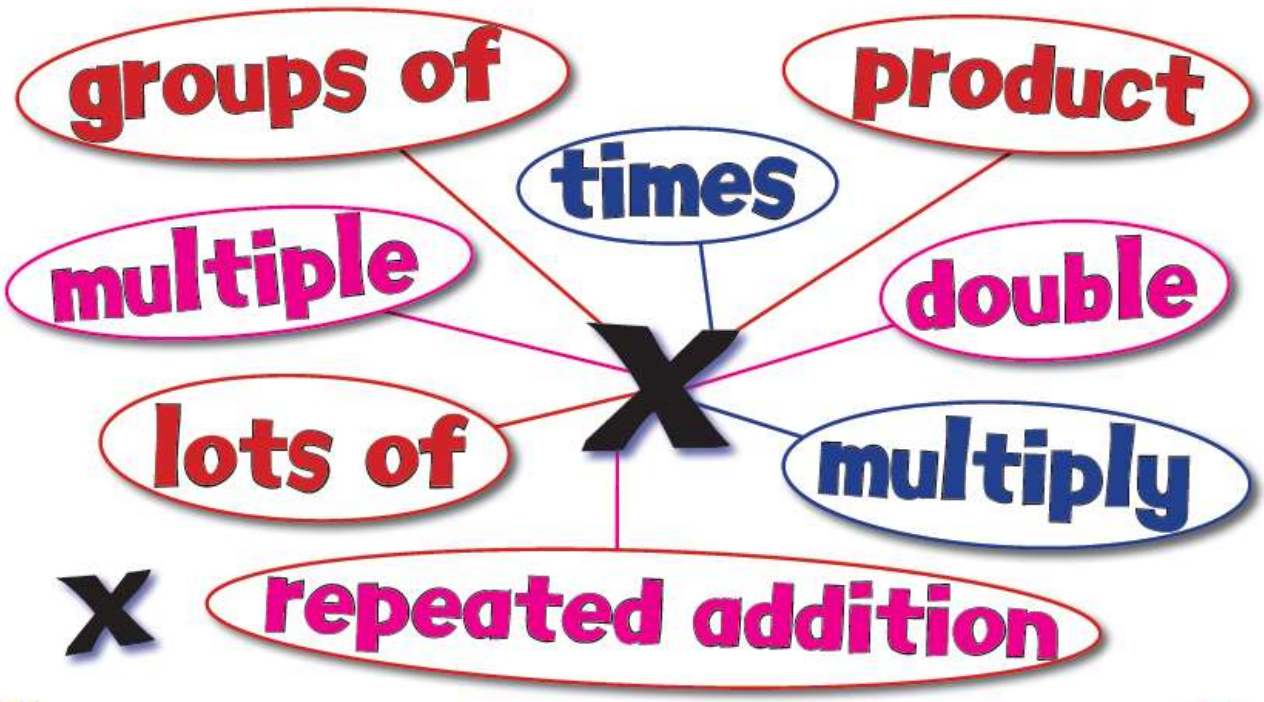
Multiplication Vocabulary



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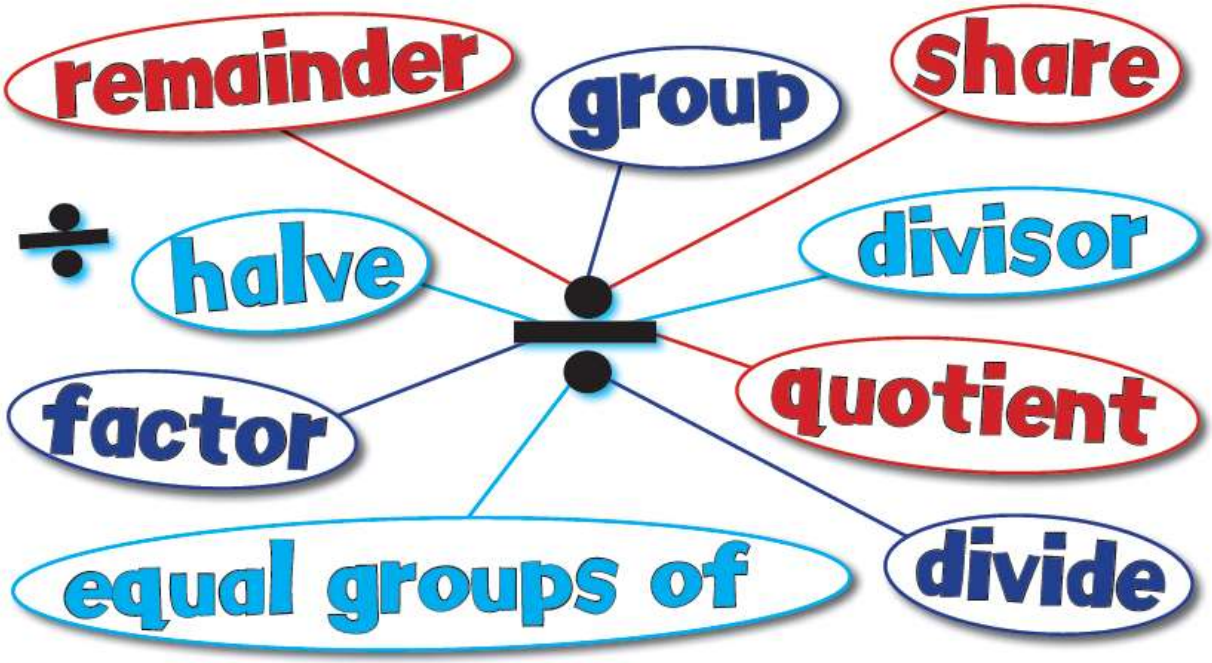
Division Vocabulary



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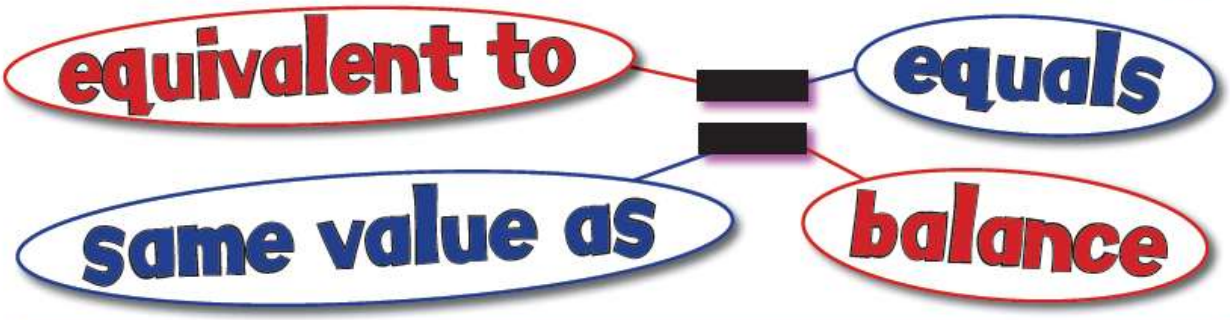
Calculation Vocabulary



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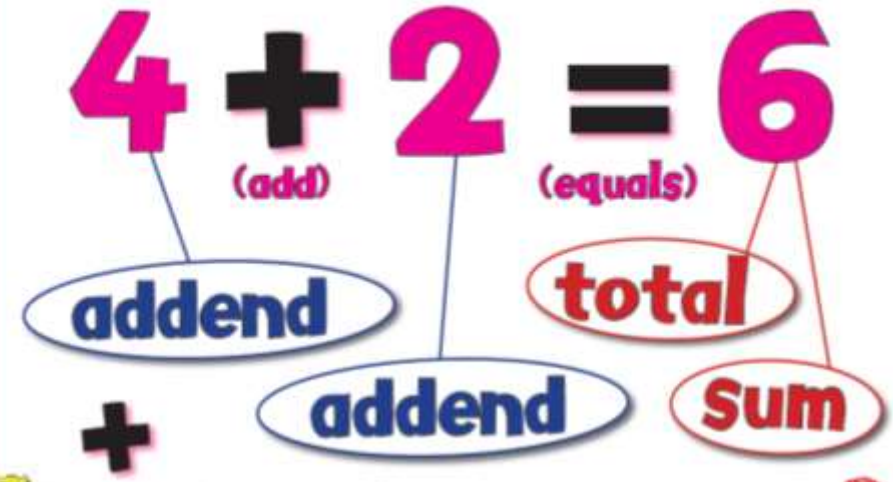
Addition Calculation



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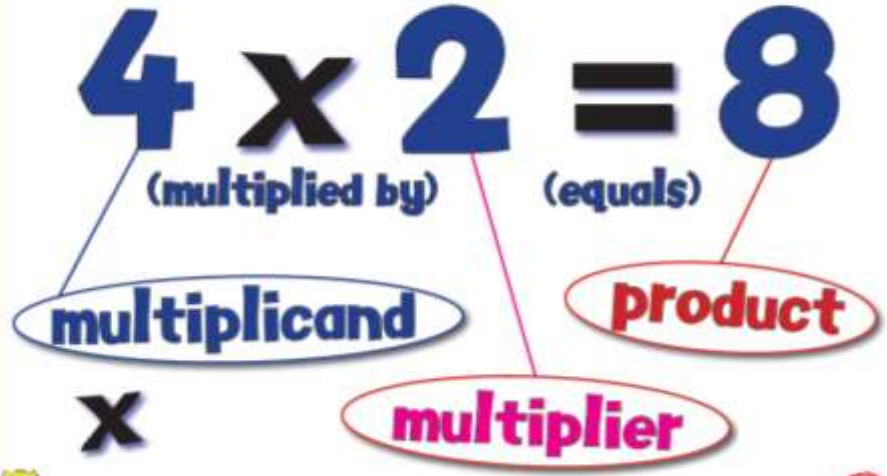
Multiplication Calculation



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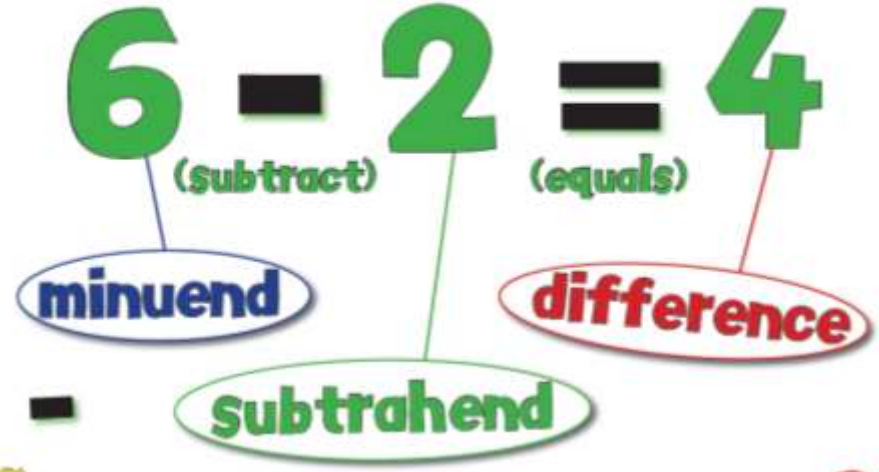
Subtraction Calculation



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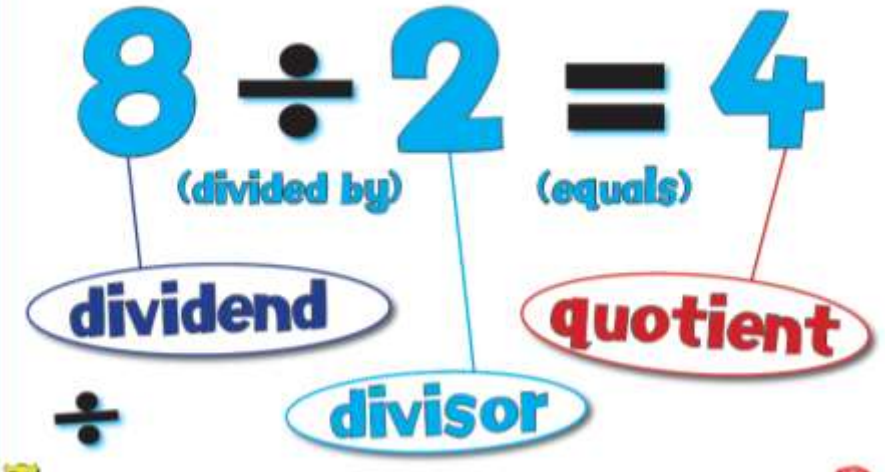
Division Calculation



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Counting

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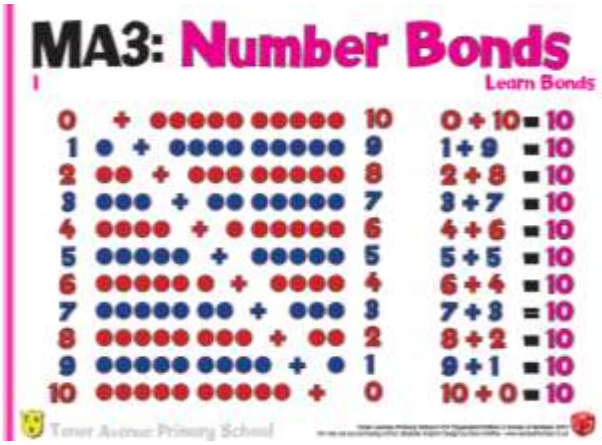
MA3: Number Bonds
1
Learn Bonds
0 + 10 = 10
1 + 9 = 10
2 + 8 = 10
3 + 7 = 10
4 + 6 = 10
5 + 5 = 10
6 + 4 = 10
7 + 3 = 10
8 + 2 = 10
9 + 1 = 10
10 + 0 = 10
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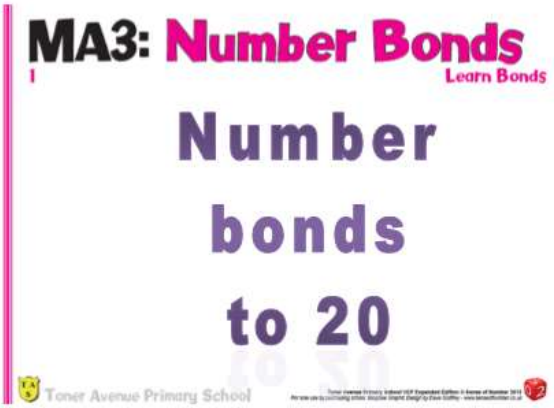
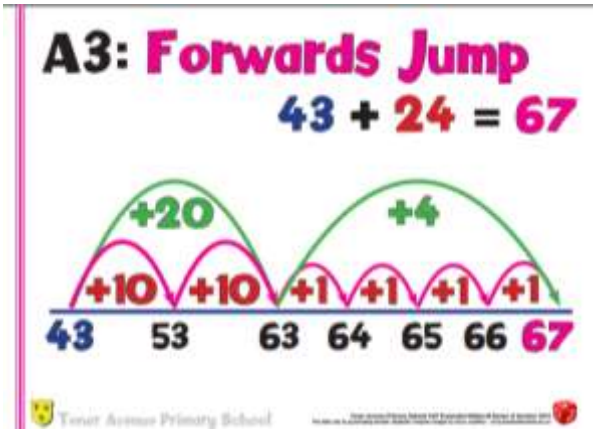

MA3: Number Bonds
1
Learn Bonds
Number
bonds
to 20
Toner Avenue Primary School


A3: Forwards Jump
43 + 24 = 67
+20
+4
+10
+10
+1
+1
+1
+1
43
53
63
64
65
66
67
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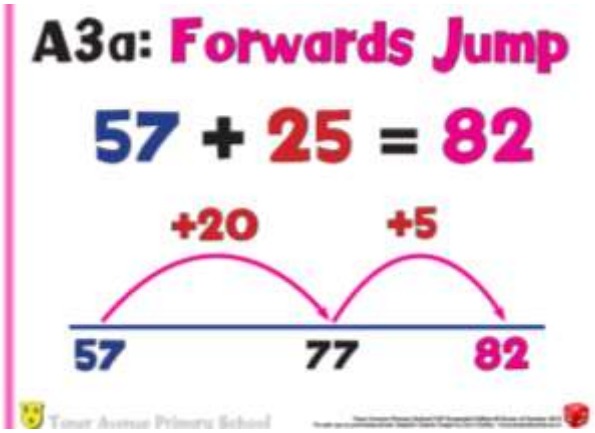
A3a: Forwards Jump
57 + 25 = 82
+20
+5
57
77
82
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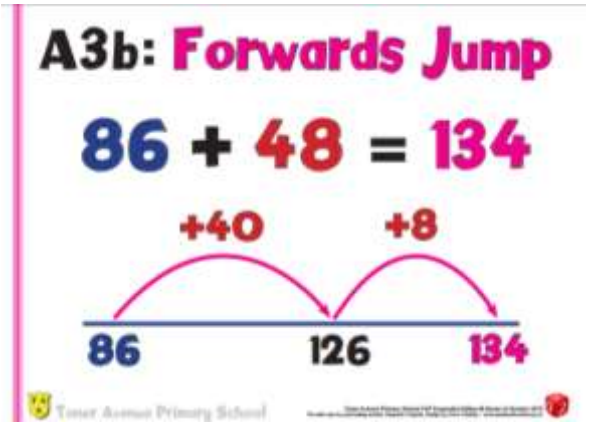
A3b: Forwards Jump
86 + 48 = 134
+40
+8
86
126
134
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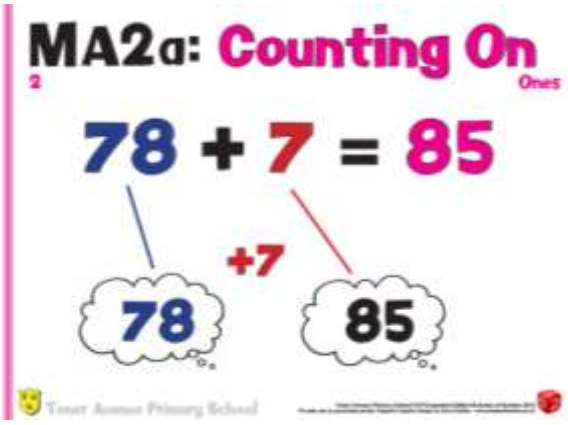
MA2a: Counting On
2
Ones
78 + 7 = 85
+7
78
85
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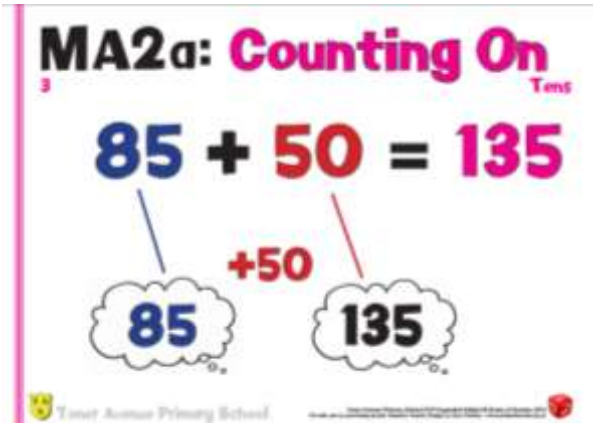
MA2a: Counting On
3
Tens
85 + 50 = 135
+50
85
135
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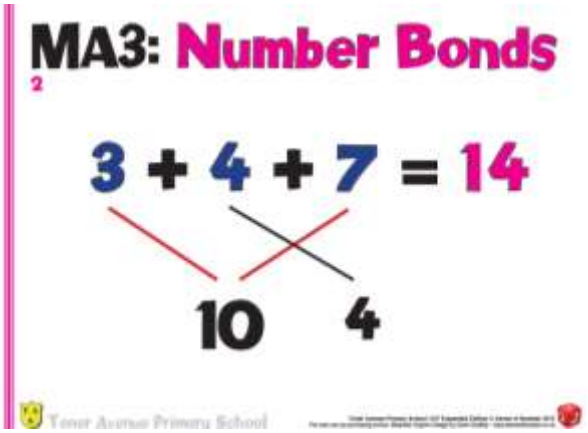
MA3: Number Bonds
2
3 + 4 + 7 = 14
10
4
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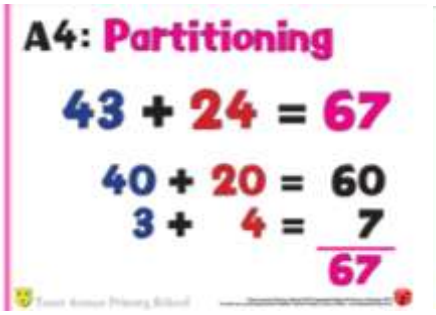
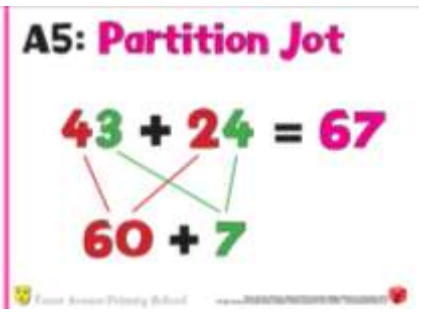
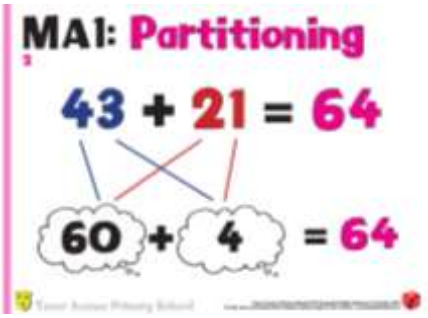
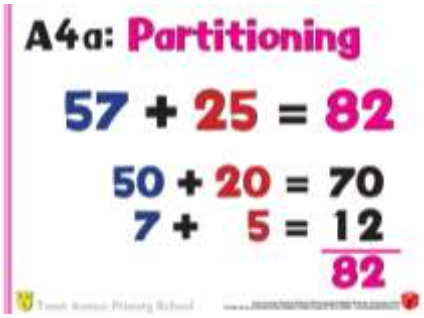
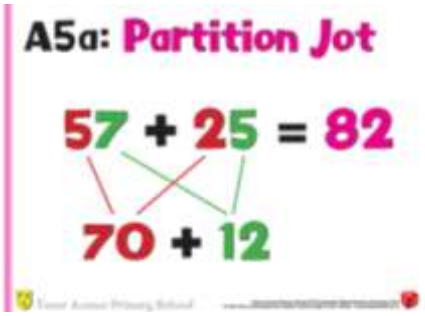
Year 2 – Counting and Equipment

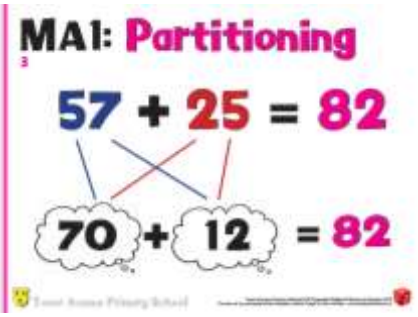


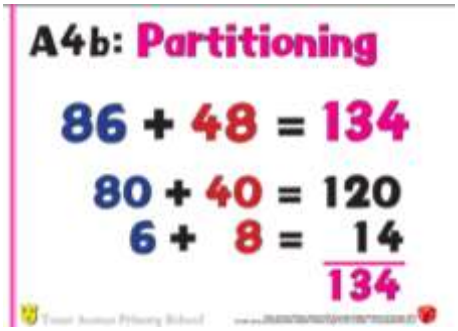


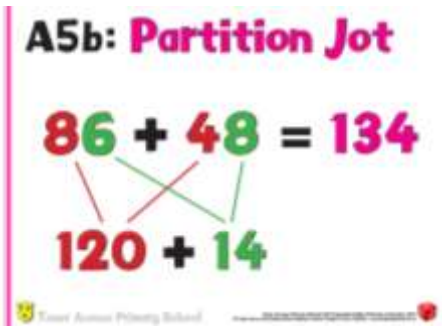






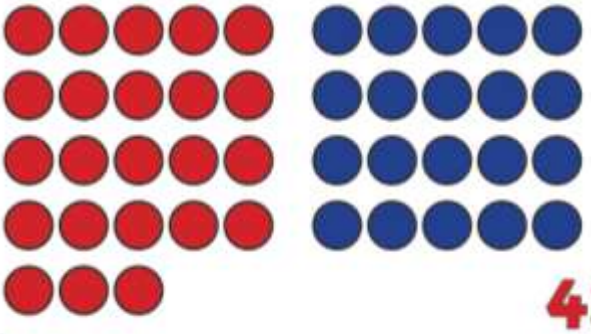






C4c: Arranging

Sets of 5 (Non Linear)



43

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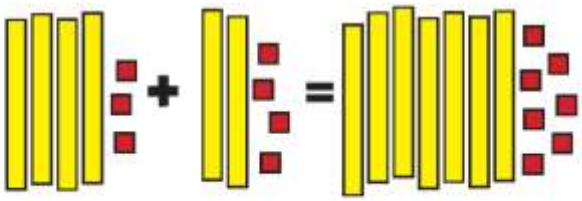
A: Base 10

43 + 24 = 67



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B: Arrow Cards

43 + 24 = 67

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C: Hundred Square

43 + 24 = 67

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

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E: Place Value Counters

43 + 24 = 67

10s	1s
10 10 10 10	1 1 1
10 10	1 1 1 1

60 7 67

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F: Money

43 + 24 = 67

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Subtraction

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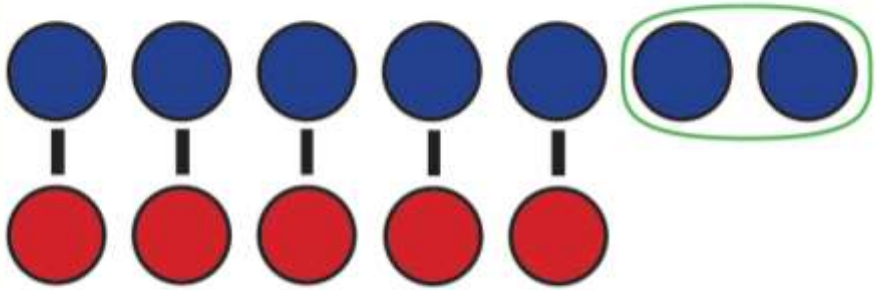
S2: What's the Difference?



7 - 5 = 2

"How many more is 7 than 5? What is the difference?"

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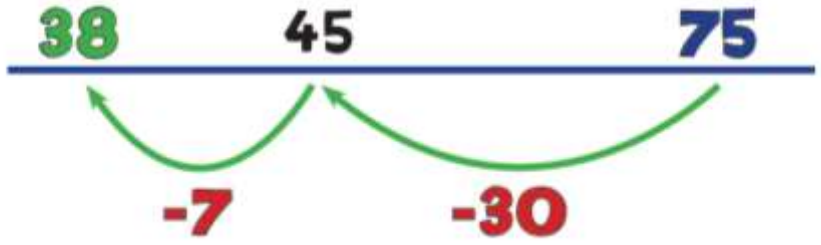
S7: Backwards Jump



75 - 37 = 38

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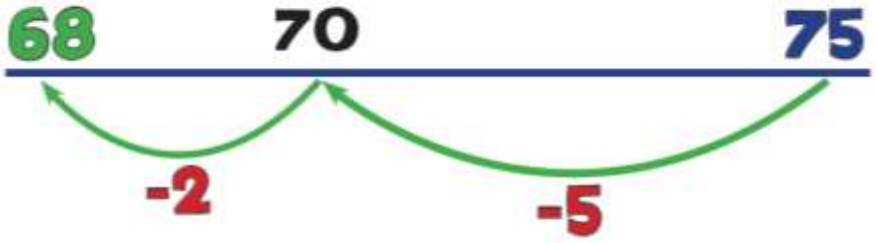
S5: Backwards Boing



75 - 7 = 68

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(S8: Triple Jump!)

Additional

87 - 23 = 64

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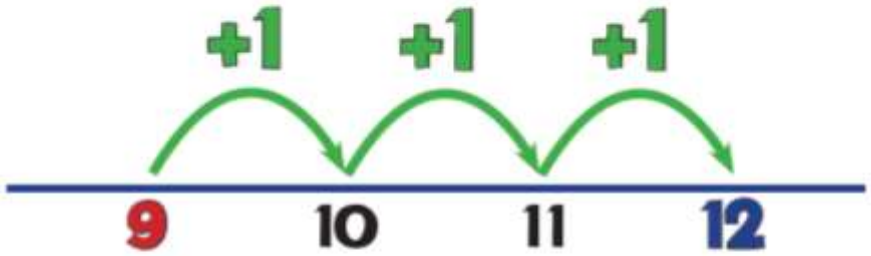
S4: Counting On



12 - 9 = 3

"How many more is 12 than 9? What is the difference?"

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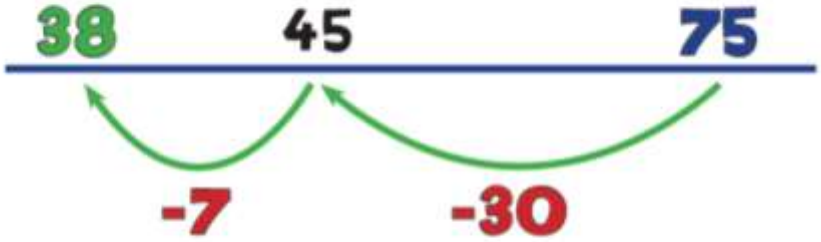
S7: Backwards Jump



75 - 37 = 38

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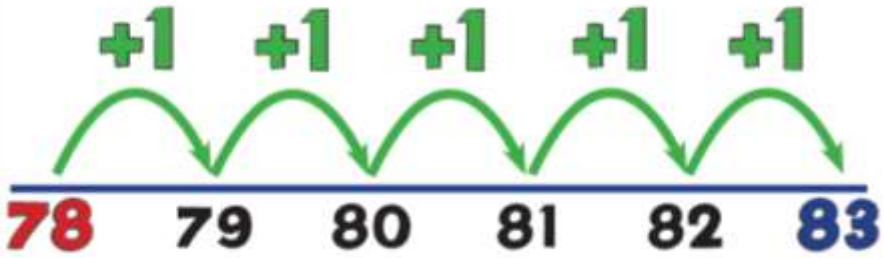
S4a: Counting On



83 - 78 = 5

"How many more is 83 than 78? What is the difference?"

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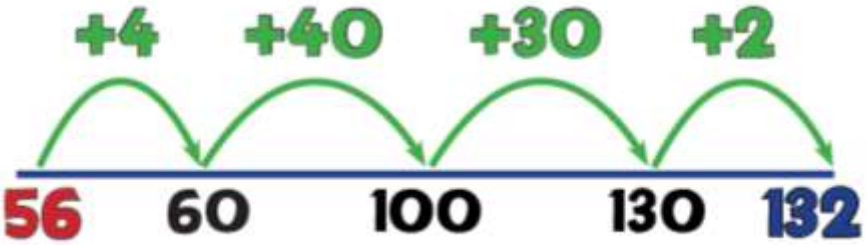
S8b: Quad Jump!



132 - 56 = 76

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Multiplication

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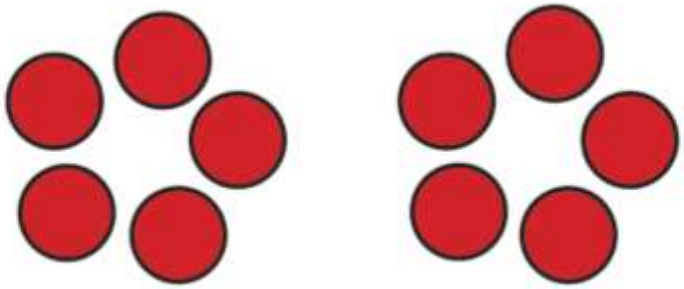
Year 2 - Multiplication

(M1: Groups)



"2 groups of 5 counters makes 10 counters altogether"

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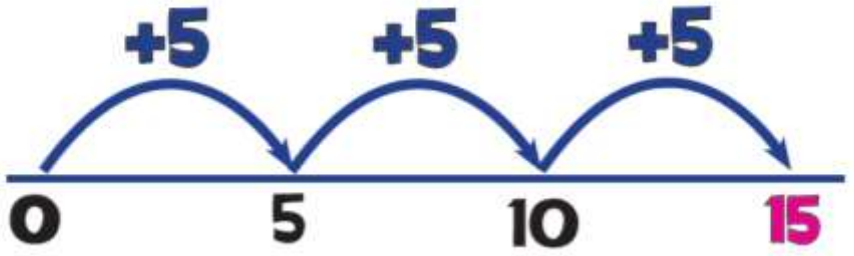
M2: Repeated Addition

(Number Line)



5 x 3 = 5 + 5 + 5 = 15

"5 times 3" means "5, 3 times!"

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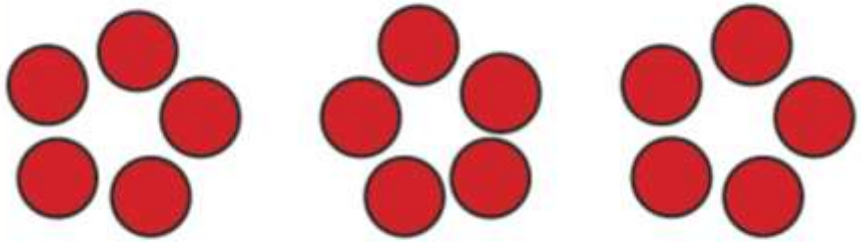
M1: Repeated Addition

(Groups)



5 x 3 = 5 + 5 + 5 = 15

"5 multiplied by 3" means "5, 3 times", which gives "3 lots of 5"!

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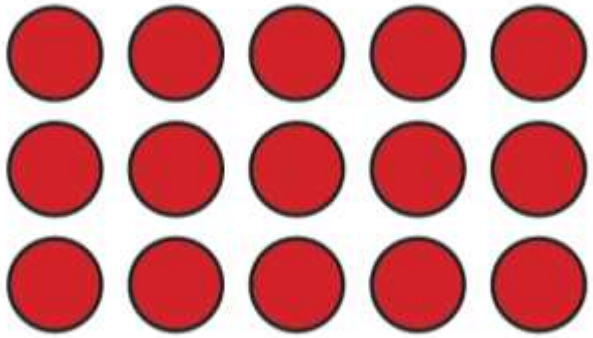
M3: Arrays



3 x 5 = 15 or 5 x 3 = 15

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Mx2: Table Facts

2x table

2

2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
2 x 11 = 22
2 x 12 = 24

2 x 7 = 14
2 x 2 = 4
2 x 12 = 24
2 x 5 = 10
2 x 9 = 18
2 x 10 = 20
2 x 1 = 2
2 x 11 = 22
2 x 4 = 8
2 x 3 = 6
2 x 8 = 16
2 x 6 = 12

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Mx10: Table Facts

10x table

10

10 x 1 = 10
10 x 2 = 20
10 x 3 = 30
10 x 4 = 40
10 x 5 = 50
10 x 6 = 60
10 x 7 = 70
10 x 8 = 80
10 x 9 = 90
10 x 10 = 100
10 x 11 = 110
10 x 12 = 120

10 x 9 = 90
10 x 12 = 120
10 x 4 = 40
10 x 5 = 50
10 x 7 = 70
10 x 10 = 100
10 x 1 = 10
10 x 6 = 60
10 x 2 = 20
10 x 11 = 110
10 x 8 = 80
10 x 3 = 30

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Mx3: Table Facts

3x table

3

3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
3 x 4 = 12
3 x 5 = 15
3 x 6 = 18
3 x 7 = 21
3 x 8 = 24
3 x 9 = 27
3 x 10 = 30
3 x 11 = 33
3 x 12 = 36

3 x 5 = 15
3 x 12 = 36
3 x 2 = 6
3 x 4 = 12
3 x 8 = 24
3 x 3 = 9
3 x 7 = 21
3 x 9 = 27
3 x 11 = 33
3 x 6 = 18
3 x 10 = 30
3 x 1 = 3

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Mx5: Table Facts

5x table

5

5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
5 x 11 = 55
5 x 12 = 60

5 x 5 = 25
5 x 11 = 55
5 x 3 = 15
5 x 6 = 30
5 x 7 = 35
5 x 10 = 50
5 x 2 = 10
5 x 12 = 60
5 x 4 = 20
5 x 1 = 5
5 x 8 = 40
5 x 9 = 45

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Division

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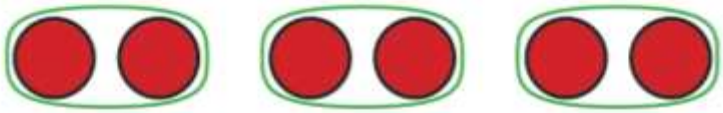
D2: Grouping (Concept)



"How many groups of 2 can I make out of 6?
Answer: 3

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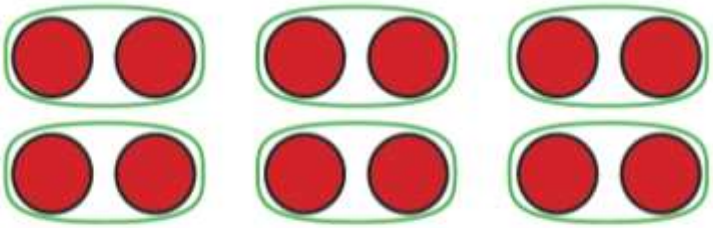
D4: Division as Grouping

12 ÷ 2 = 6

"How many groups of 2 can I fit into 12?"
Answer: 6



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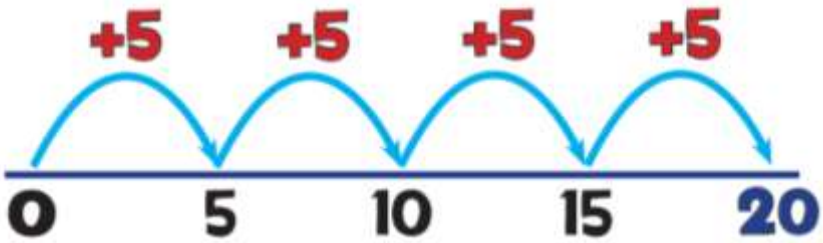
D5: Grouping on a Number Line



"How many 5s in 20?"
Answer: 4

20 ÷ 5 = 4

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