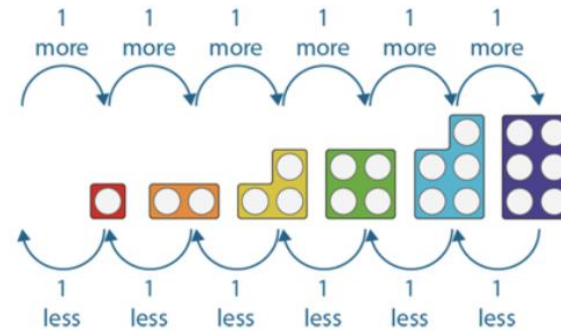


## KEY INSTANT RECALL FACTS (KIRFS)

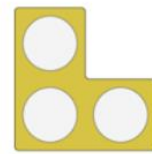
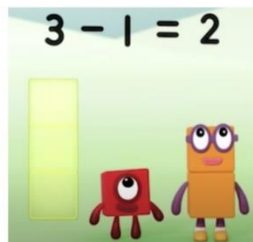
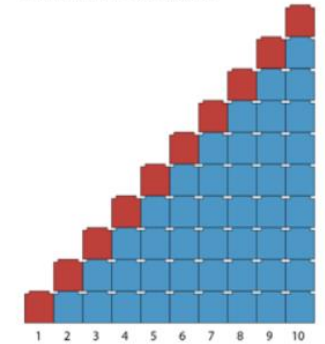
	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Reception	I can count forwards and backwards to 10 (20)	I can say one more and one less than a number	I know addition number bonds to 10	I know addition and subtraction bonds to 10	I know doubles to 10	I know halves to 10
Year 1	I know number bonds to 10	I know fact families to 10	I know number bonds to 20	I can count forwards and backwards to 50 from any given number.	I know doubles and halves of numbers to 10.	I can count in 2s, 5s and 10s
Year 2	I know number bonds to 20	I know number bonds to 100 (e.g. $30 + 70$ )	I can recall doubles and halves to 20	I can recall multiplication and division facts for the 2 and 10 x tables.	I can recall multiplication and division facts for the 5 x tables.	I can tell the time - to five minutes, including quarter past/to the hour
Year 3	I know all number bonds to 20 and can use number bonds to derive pairs of numbers that total 100 e.g. $64 + 36 = 100$	I know multiplication and division facts for the 2, 5 and 10 x tables	I know the multiplication and division facts for the 3 times tables	I know multiplication and division facts for the 4 times tables	I know multiplication and division facts for the 8 times tables	I can tell the time to the nearest minute (analogue & digital) on 12 and 24 hour clocks
Year 4	I can find out what must be added to any 2-digit number to make 100.	I know the multiplication and division facts for the 3, 6 and 9 times tables	I know the multiplication and division facts for the 7 and 11 times tables.	I know the multiplication and division facts for the 11 and 12 times table.	I can recognise decimal equivalents of fractions.	I can multiply and divide single-digit numbers by 10 and 100.
Year 5	I know the multiplication and division facts for all times tables up to $12 \times 12$ .	I can count forwards or backwards in steps of powers of 10 (e.g. 100, 10,000 etc) for any given number up to 1,000,000	I know all pairs of factors of numbers up to 100 and can identify prime numbers up to 19.	I know the decimal and percentage equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , tenths and fifths	I know decimal number bonds to 1 and 10.	I know all squared numbers up to $12 \times 12$
Year 6	I know the multiplication and division facts for all times tables up to $12 \times 12$	I can multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3dp	I can derive multiplication and division facts using decimal numbers (e.g. $8 \times 0.7 = 5.6$ )	I know all previous number bonds including decimals	I know the decimal and percentage equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , tenths and fifths	I can identify the properties of 3D shapes

# RECEPTION

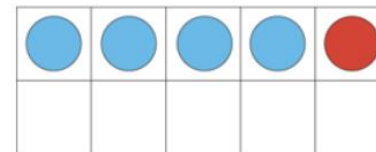
	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Reception	I can count forwards and backwards to 10 (20)	I can say one more and one less than a number	I know addition number bonds to 10	I know addition and subtraction bonds to 10	I know doubles to 10	I know halves to 10



Multilink staircase – one more/less:

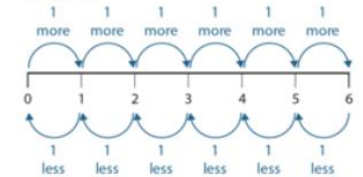


- 'Two is one less than three.'
- 'Three is one more than two.'



- 'Four is one less than five.'
- 'Five is one more than four.'

Number line:

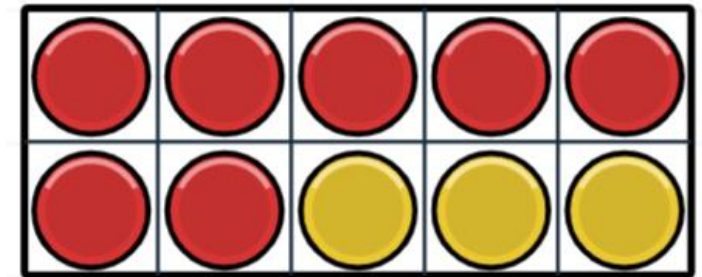
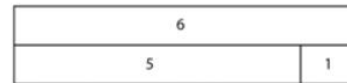
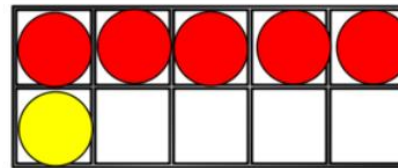


# YEAR 1

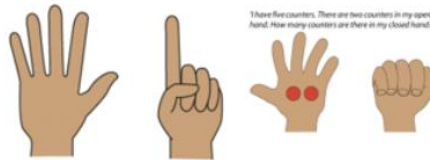
	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year 1	I know number bonds to 10	I know fact families to 10	I know number bonds to 20	I can count forwards and backwards to 50 from any given number.	I know doubles and halves of numbers to 10.	I can count in 2s, 5s and 10s



The concept of '5 and a bit' structure

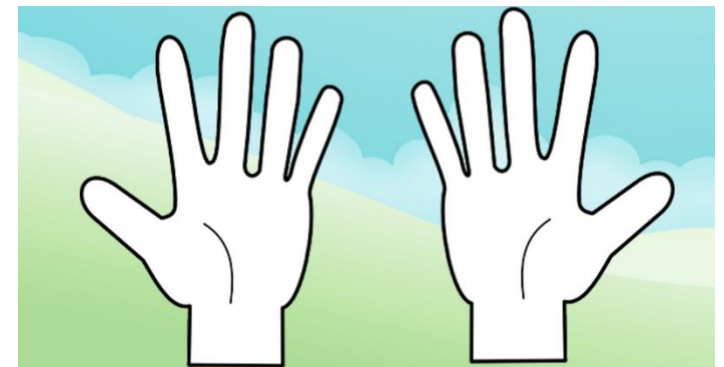
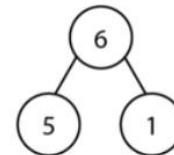
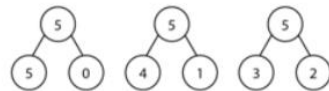


	Blue	Red
	0	5
	1	4
	2	3
	3	2
	4	1
	5	0



'I have five counters. There are two counters in my open hand. How many counters are there in my closed hand?'

- 'Six is five and one more.'
- 'Six is the whole; five is a part; one is a part.'



[ncetm.org.uk/classroom-resources/primm-1-03-composition-of-numbers-0-5/](https://ncetm.org.uk/classroom-resources/primm-1-03-composition-of-numbers-0-5/)  
Number Blocks

$9 - 2 = \square$

$\square - 2 = \square$

$\square - 2 = \square$

$$2 = 1 + 1$$

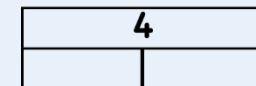
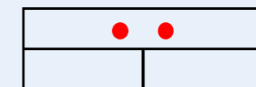
half of 2 is

$$4 = 2 + \square$$

half of  is

$$8 = \square + \square$$

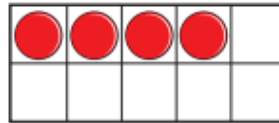
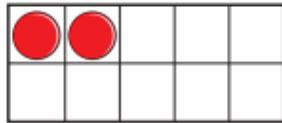
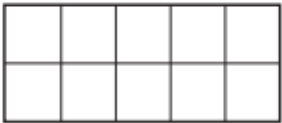
of  is



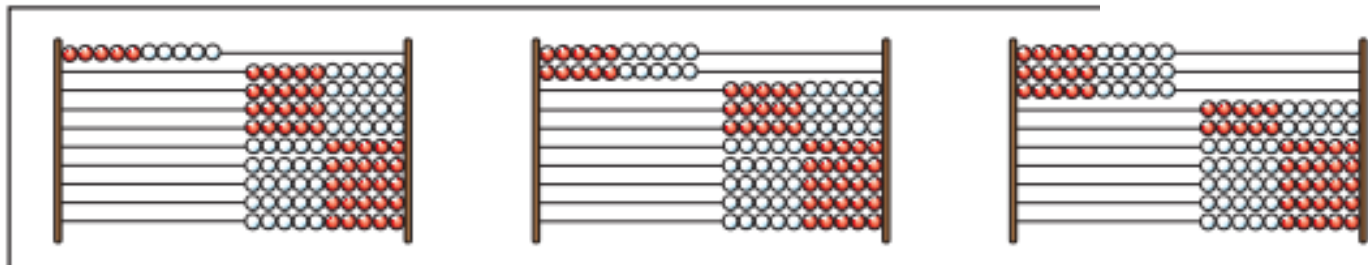
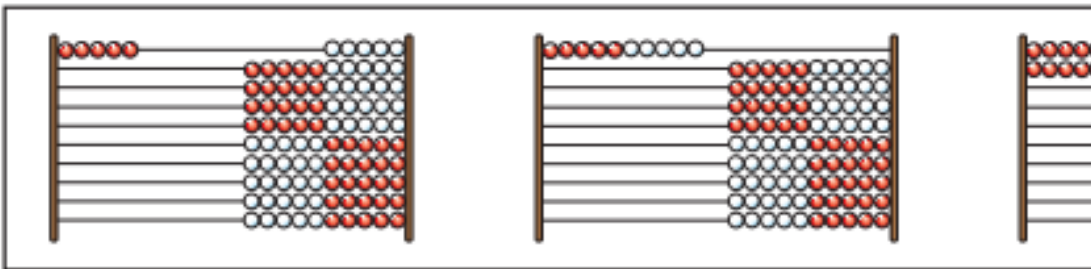
# YEAR 2

Year 2	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
	I know number bonds to 20	I know number bonds to 100 (e.g. 30 + 70)	I can recall doubles and halves to 20	I can recall multiplication and division facts for the 2 and 10 x tables.	I can recall multiplication and division facts for the 5 x tables.	I can tell the time - to five minutes, including quarter past/to the hour

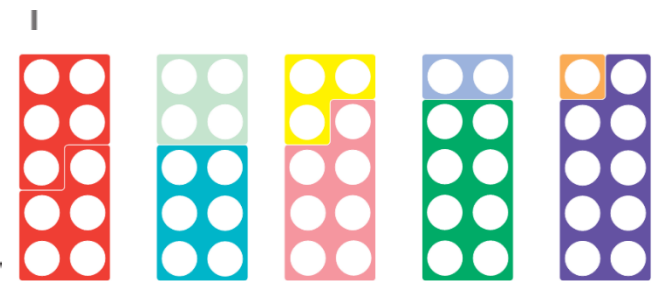
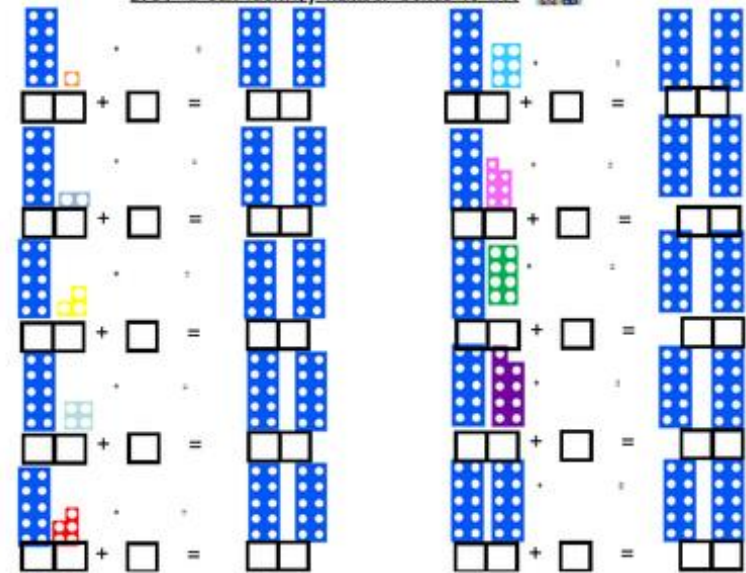
What numbers are shown?



Make the next two numbers in the pattern.



L.O.: I can identify number bonds to 20.

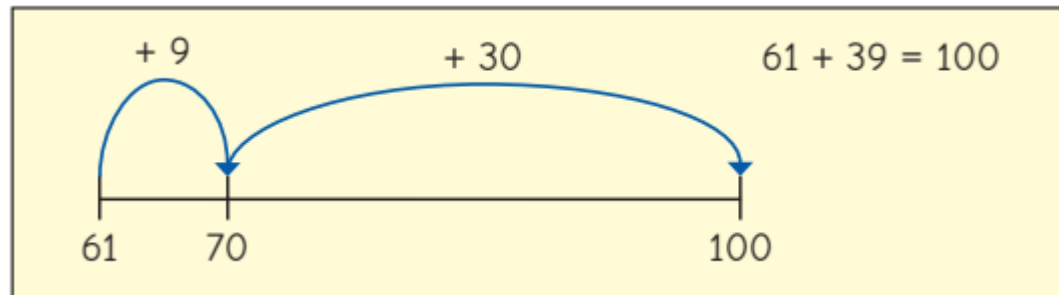
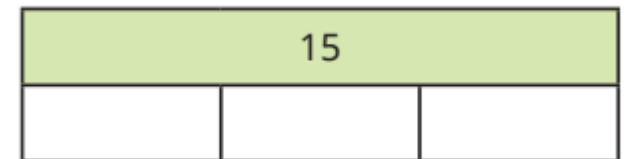
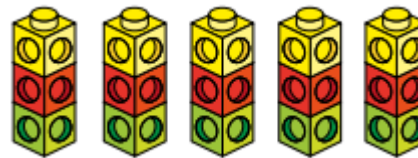
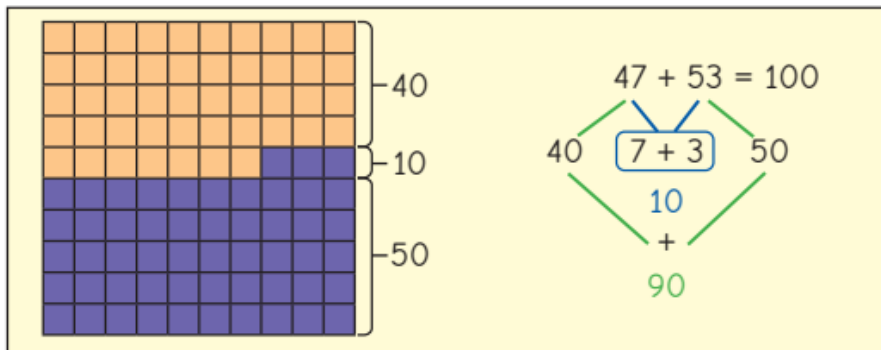


For 5, 4, 3, 2, 1



# YEAR 3

	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year 3	I know all number bonds to 20 and can use number bonds to derive pairs of numbers that total 100 e.g. $64 + 36 = 100$	I know multiplication and division facts for the 2, 5 and 10 x tables	I know the multiplication and division facts for the 3 times tables	I know multiplication and division facts for the 4 times tables	I know multiplication and division facts for the 8 times tables	I can tell the time to the nearest minute (analogue & digital) on 12 and 24 hour clocks

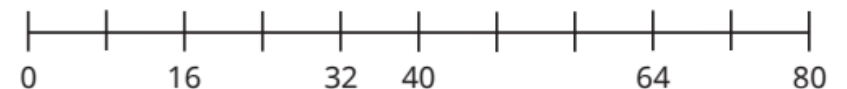


\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_

\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_



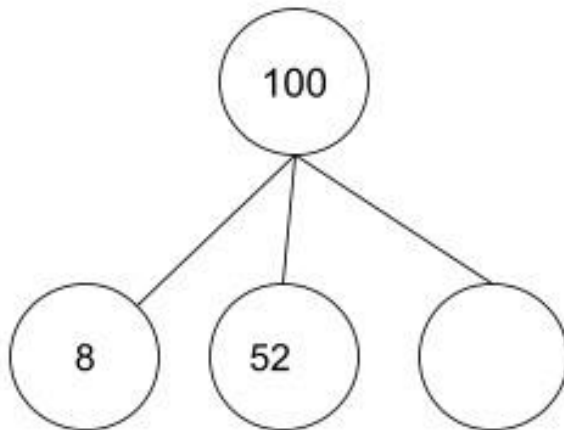
# YEAR 4

	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year 4	I can find out what must be added to any 2-digit number to make 100.	I know the multiplication and division facts for the 3, 6 and 9 times tables	I know the multiplication and division facts for the 7 and 11 times tables.	I know the multiplication and division facts for the 11 and 12 times table.	I can recognise decimal equivalents of fractions.	I can multiply and divide single-digit numbers by 10 and 100.

$$52 + \underline{\quad} = 100$$

3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

100
52



- ▶ There are \_\_\_\_\_ rows of 4 oranges.  
There are \_\_\_\_\_ oranges in total.  
\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
- ▶ The oranges are shared into 9 boxes.  
There are \_\_\_\_\_ oranges in each box.  
\_\_\_\_\_ ÷ \_\_\_\_\_ = \_\_\_\_\_



Here are Annie's workings for  $9 \times 7$

$$\begin{aligned} 9 \times 7 &= 10 \times 7 - 7 \\ &= 70 - 7 \\ &= 63 \end{aligned}$$

Use Annie's method to complete the number sentences.

- ▶  $9 \times 3 = 10 \times \underline{\quad} - \underline{\quad}$
- ▶  $9 \times 8 = 10 \times \underline{\quad} - \underline{\quad}$
- ▶  $9 \times 6 = 10 \times \underline{\quad} - \underline{\quad}$
- ▶  $9 \times 9 = 10 \times \underline{\quad} - \underline{\quad}$

Sam is building the 12 times-table.



$$1 \times 12 = 12$$



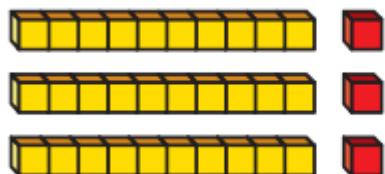
$$2 \times 12 = 24$$



$$3 \times 12 = 36$$

Use base 10 to help you complete the multiplications.

- ▶  $12 \times 5 = \underline{\quad}$
- ▶  $5 \times 12 = \underline{\quad}$
- ▶  $48 \div 12 = \underline{\quad}$
- ▶  $84 \div 12 = \underline{\quad}$
- ▶  $12 \times \underline{\quad} = 120$
- ▶  $12 \times \underline{\quad} = 132$
- ▶  $\underline{\quad} \div 12 = 8$
- ▶  $\underline{\quad} = 9 \times 12$



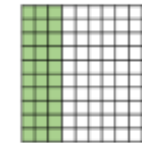
$$3 \times 11 = 33$$

# YEAR 5

Year 5	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
	I know the multiplication and division facts for all times tables up to $12 \times 12$ .	I can count forwards or backwards in steps of powers of 10 (e.g. 100,10,000 etc) for any given number up to 1,000,000	I know all pairs of factors of numbers up to 100 and can identify prime numbers up to 19.	I know the decimal and percentage equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , tenths and fifths	I know decimal number bonds to 1 and 10.	I know all squared numbers up to $12 \times 12$

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000
100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1000	2000	3000	4000	5000	6000	7000	8000	9000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

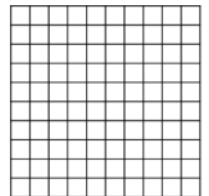


$$0.3 = \frac{3}{10} = \frac{30}{100}$$

$$0.55 + \boxed{\phantom{00}} = 1$$

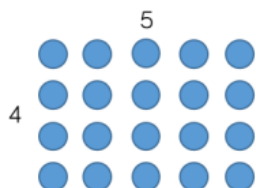
$$1 = 0.32 + \boxed{\phantom{00}}$$

$$0.11 + 0.5 + \boxed{\phantom{00}} = 1$$



		8
$3^3$	$3 \times 3 \times 3$	27
$4^3$		
$5^3$	$5 \times 5 \times 5$	
	$6 \times 6 \times 6$	

If you have twenty counters, how many different ways of arranging them can you find?



How many factors of twenty have you found by arranging your counters in different arrays?

Use the place value grid to multiply 3.24 by 10, 100 and 1,000

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
			3 2 4	2 4	4

When you multiply by \_\_\_\_, you move the counters \_\_\_\_ places to the left.

# YEAR 6

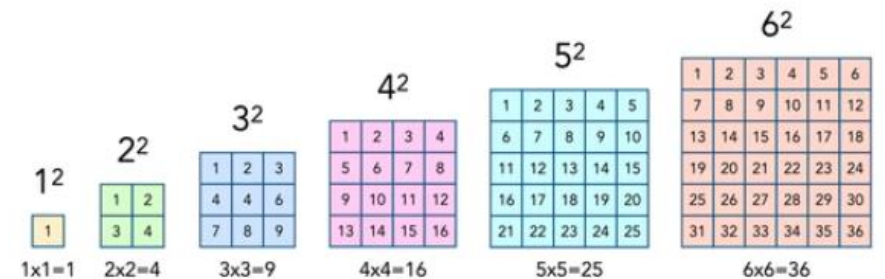
	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year 6	I know the multiplication and division facts for all times tables up to 12 x 12	I can multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3dp	I can derive multiplication and division facts using decimal numbers (e.g. $8 \times 0.7 = 5.6$ )	I know all previous number bonds including decimals	I know the decimal and percentage equivalents of the fractions $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , tenths and fifths	I can identify the properties of 3D shapes

## Related Multiplication facts.

An example might be that if I know that  $5 \times 7 = 35$ , then I also know the following related facts.

- $7 \times 5 = 35$
- $35 \div 5 = 7$  and  $35 \div 7 = 5$
- $50 \times 7 = 350$  and  $5 \times 70 = 350$
- $0.5 \times 7 = 3.5$  and  $5 \times 0.7 = 3.5$
- $0.05 \times 7 = 0.35$  and  $5 \times 0.07 = 0.35$  and  $0.5 \times 0.7 = 0.35$ , etc.

For each of the multiplication facts above, there are also related division facts.



x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
3	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
4	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
5	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
6	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
7	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
8	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
9	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135
10	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
11	11	22	33	44	55	66	77	88	99	110	121	132	143	154	165
12	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180
13	13	26	39	52	65	78	91	104	117	130	143	156	169	182	195
14	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210
15	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225

## Multiplying and Dividing by 10, 100 and 1000

10 000	1000	100	10	1	●	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
					●			

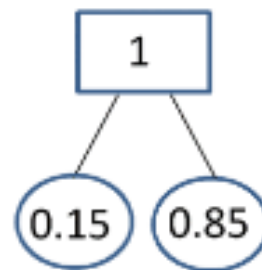
### Multiplying

X 10  
X 100  
X 1000



### Dividing

÷ 10  
÷ 100  
÷ 1000



$$\begin{aligned}
 0.15 + 0.85 &= 1 \\
 0.85 + 0.15 &= 1 \\
 1 - 0.15 &= 0.85 \\
 1 - 0.85 &= 0.15
 \end{aligned}$$