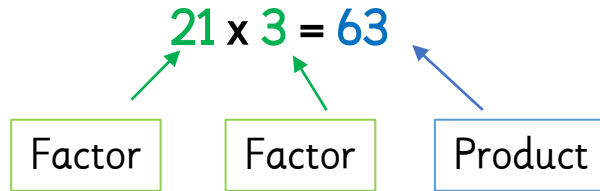




# Multiplication

Numbers combined to give a **product**.

A product is the answer when 2 or more numbers are multiplied

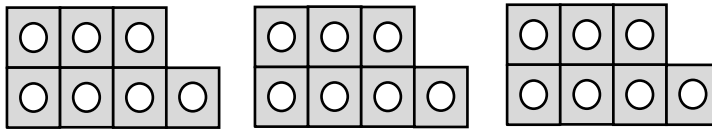


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# Multiply

To add equal groups of numbers.



$$7 \times 3 = 21$$

There are 3 lots of 7s.

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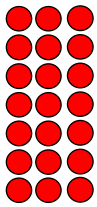
# Divide

To split (a number) into equal parts or groups.

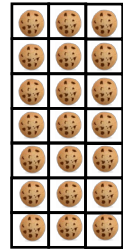
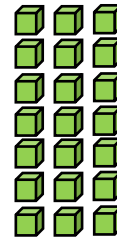
$$18 \div 6 = 3$$

You can divide by sharing or grouping.

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# Arrays

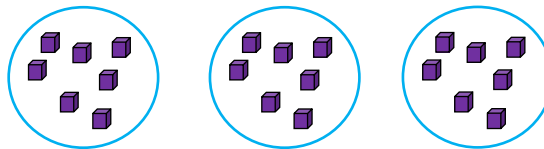


These arrays show  
 $7 \times 3 = 21$

Arrays are objects or shapes in rows and columns.  
They help us to multiply.

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# Equal Groups



$$7 \times 3 = 21$$

There are 3 groups with the same amount in each group.  
They are equal groups.

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# Division Facts

The division number sentence related to times tables.

$$7 \div 7 = 1 \quad 14 \div 2 = 7$$

$$21 \div 3 = 7 \quad 28 \div 3 = 7$$

These are division facts for the 7 times tables.

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# Multiplier

$$7 \times 3 = 21$$

Multiplier or factor (purple arrow pointing to 7)  
Multiplicand or factor (green arrow pointing to 3)  
Product (red arrow pointing to 21)

The number you are multiplying by.  
We can also call this a factor!

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# Multiplicand

$$7 \times 3 = 21$$

Multiplier or factor (purple arrow pointing to 7)  
Multiplicand or factor (green arrow pointing to 3)  
Product (red arrow pointing to 21)

The number that gets multiplied.  
We can also call this a factor!

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# Product

$$4 \times 3 = 12$$

Multiplier or factor (purple arrow pointing to 4)  
Multiplicand or factor (green arrow pointing to 3)  
Product (red arrow pointing to 12)

The answer when two or more numbers are multiplied.

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# Dividend

$$44 \div 11 = 4$$

Diagram illustrating the division equation  $44 \div 11 = 4$ . The number 44 is labeled as the Dividend (purple arrow), 11 is labeled as the Divisor (green arrow), and 4 is labeled as the Quotient (red arrow).

The number that is being divided into equal groups.

# Divisor

$$44 \div 11 = 4$$

Diagram illustrating the division equation  $44 \div 11 = 4$ . The number 44 is labeled as the Dividend (purple arrow), 11 is labeled as the Divisor (green arrow), and 4 is labeled as the Quotient (red arrow).

The number of groups that the **dividend** is being divided into.

# Quotient

$$44 \div 11 = 4$$

Diagram illustrating the division equation  $44 \div 11 = 4$ . The number 44 is labeled as the Dividend (purple arrow), 11 is labeled as the Divisor (green arrow), and 4 is labeled as the Quotient (red arrow).

The result of a division calculation.

# Multiples

Multiples are the numbers that appear in the number's multiplication table.

**Multiples of 3: 0, 3, 6, 9, 12, 15, 18, 21, 24**

We get multiples after multiplying the number by a whole number.

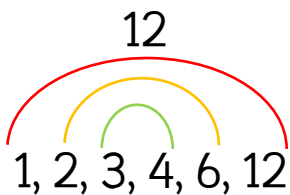
$$6 \times 1 = \underline{6} \quad 6 \times 2 = \underline{12} \quad 6 \times 3 = \underline{18}$$



These are multiples of 6. Can you think of any more?

# Factors

Numbers that are multiplied to make another number.



3 and 4 are **factors** of 12 because  $3 \times 4 = 12$

# Distributive Law

If you didn't know  $7 \times 8$ , you could do  $5 \times 8$  and add the answer to  $2 \times 8$ .  
You would get the correct answer!

$$\begin{array}{r} 5 \times 8 = 40 \\ 2 \times 8 = 16 \\ \hline 7 \qquad \quad 56 \end{array}$$

$$7 \times 8 = 56$$

I have 'distributed' (spread out) the 7 into a 5 and a 2 and multiplied them both by 8. I then add the products.









# Place Holder

We use zeros to keep digits in their correct place value columns.

H	T	O
5	0	2

Look at the number **five hundred and two**. If we missed out the zero in the tens column, the number would be 52. We use zero as a **place holder**.

# Partitioning

Tens	Ones
	
	
	
	

To split/ separate/ divide numbers into smaller parts. This can make calculations easier.

$$14 \times 4 = 10 \times 4 + 3 \times 4$$

# Exchange

To change ten units in a place value column for one in the next column of equal value. This method is used when calculating.

$$42 \div 3 = 14$$



# Short Division

A calculation where you divide the single digit into the other number, one digit at a time.

$$4 \overline{) 4951}$$

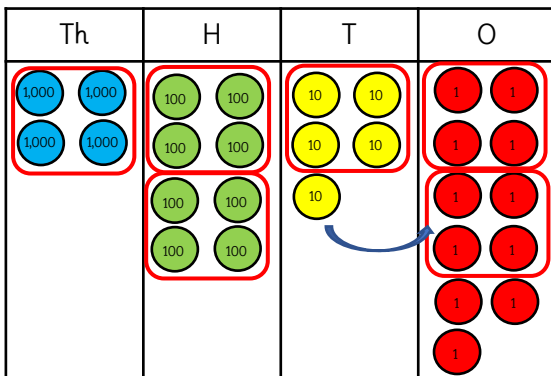
# Long Division

$$\begin{array}{r} 017 \\ 25 \overline{) 425} \\ \underline{0} \phantom{0} \\ 25 \phantom{0} \\ \underline{175} \phantom{0} \\ 175 \\ \underline{000} \end{array}$$

A step-by-step method of dividing by a two-digit number.

# Remainder

An amount left over after dividing.

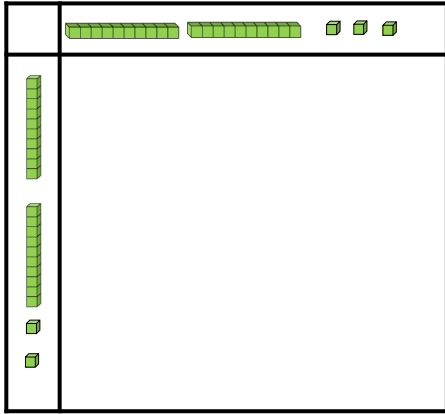


$$4,851 \div 4 =$$

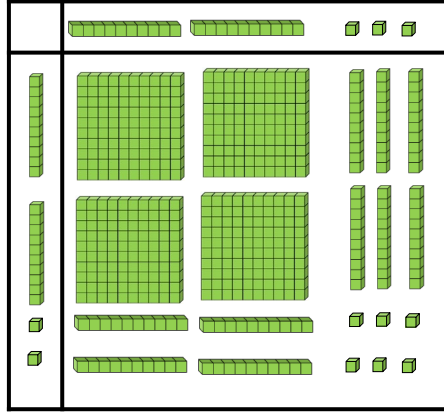
	1	1	1	2	r3
4	4	8	5	11	

# Area Model

A method which helps to see the size scale linked to multiplying.  
 $23 \times 22$

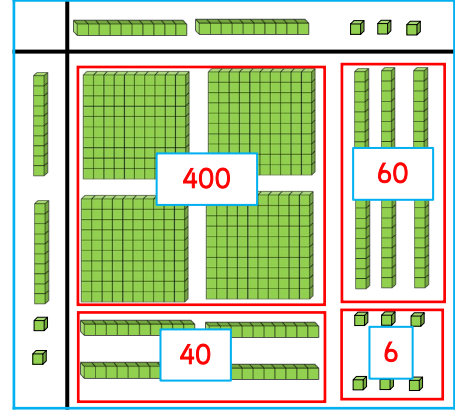


Build the length and width using the calculation.



Multiply the length by the width.

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Find the total of your area.

$23 \times 22 = 506$

# Long Multiplication

	2	6			
x	1	3			
	7	8	(26 x 3)		
	2	6	0	(26 x 20)	
	3	3	8		

1

Long multiplication is a way to multiply large numbers.

We have multiplied 26 by 3 first of all.

We then move one place to the left.

You can use 0 as a place holder and now multiply 26 by 10.

We then add the 2 rows to find the total.

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# Integer

25

Whole numbers such as:

23,124

250

99

1

1,000,000

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# Consecutive

Numbers that follow each other continuously in order from smallest to largest.

1, 2, 3, 4, 5...

1056, 1057, 1058, 1059...

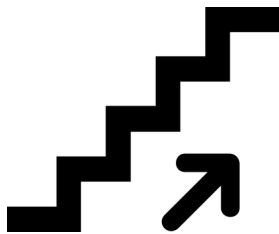
716,354, 716,355, 716,356...

310, 311, 312, 313...

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# Ascending

Numbers that increase in size from smallest to largest.

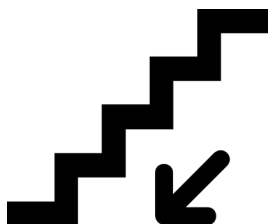


e.g.: 450, 500, 550, 600, 650...

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# Descending

Numbers that decrease in size from largest to smallest.



e.g.: 780, 760, 740, 720, 700...

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Multiplication & Division - Spring Year 5

# Multiplication

Numbers combined to give a **product**.  
A product is the answer when 2 or more numbers are multiplied

$$21 \times 3 = 63$$

Factor      Factor      Product

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Multiplication & Division - Spring Year 5

# Arrays

These arrays show  $7 \times 3 = 21$

Arrays are objects or shapes in rows and columns. They help us to multiply.

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Multiplication & Division - Spring Year 5

# Multiplier

$$7 \times 3 = 21$$

Multiplier or factor      Multiplicand or factor      Product

The number you are multiplying by. We can also call this a factor!

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Multiplication & Division - Spring Year 5

# Multiply

To add equal groups of numbers.

$$7 \times 3 = 21$$

There are 3 lots of 7s.

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Multiplication & Division - Spring Year 5

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There are 3 groups with the same amount in each group. They are equal groups.

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Multiplication & Division - Spring Year 5

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Multiplier or factor      Multiplicand or factor      Product

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Multiplication & Division - Spring Year 5

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To split (a number) into equal parts or groups.

$$18 \div 6 = 3$$

You can divide by **sharing** or **grouping**.

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Multiplication & Division - Spring Year 5

# Division Facts

The division number sentence related to times tables.

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Multiplication & Division - Spring Year 5

# Product

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The answer when two or more numbers are multiplied.

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Multiplication & Division - Spring Year 5

# Area Model

A method which helps to see the size scale linked to multiplying.

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Build the length and width using the calculation.      Multiply the length by the width.      Find the total of your area.

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Multiplication & Division - Spring Year 5

# Short Division

A calculation where you divide the single digit into the other number, one digit at a time.

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Multiplication & Division - Spring Year 5

# Dividend

$$44 \div 11 = 4$$

Dividend      Divisor      Quotient

The number that is being divided into equal groups.

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Multiplication & Division - Spring Year 5

# Long Multiplication

Long multiplication is a way to multiply large numbers. We have multiplied 26 by 3 first of all. We then move one place to the left. You can use 0 as a place holder and now multiply 26 by 10. We then add the 2 rows to find the total.

$$26 \times 3 = 78$$

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Multiplication & Division - Spring Year 5

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A step by step method of dividing by a two-digit number.

$$\begin{array}{r} 017 \\ 25 \overline{) 425} \\ \underline{01} \\ 25 \\ \underline{175} \\ 175 \\ \underline{000} \end{array}$$

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Multiplication & Division - Spring Year 5

# Divisor

$$44 \div 11 = 4$$

Dividend      Divisor      Quotient

The number of groups that the dividend is being divided into.

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Multiplication & Division - Spring Year 5

# Integer

Whole numbers such as:

25      23,124

250      99      1      1,000,000

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Multiplication & Division - Spring Year 5

# Remainder

An amount left over after dividing.

$$4851 \div 4 =$$

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Multiplication & Division - Spring Year 5

# Quotient

$$44 \div 11 = 4$$

Dividend      Divisor      Quotient

The result of a division calculation.

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Multiplication & Division - Spring Year 5

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We use zeros to keep digits in their correct place value columns.

H	T	O
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Multiplication & Division - Spring Year 5

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Multiplication & Division - Spring Year 5

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Multiplication & Division - Spring Year 5

# Partitioning

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$$14 \times 4 = 10 \times 4 + 3 \times 4$$

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Multiplication & Division - Spring Year 5

# Ascending

Numbers that increase in size from smallest to largest.

e.g. 450, 500, 550, 600, 650...

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Multiplication & Division - Spring Year 5

# Factors

Numbers that are multiplied to make another number.

12

1, 2, 3, 4, 6, 12

3 and 4 are factors of 12 because  $3 \times 4 = 12$

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Multiplication & Division - Spring Year 5

# Exchange

To change ten units in a place value column for one in the next column of equal value. This method is used when calculating.

$$42 + 3 = 14$$

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Multiplication & Division - Spring Year 5

# Descending

Numbers that decrease in size from largest to smallest.

e.g. 780, 760, 740, 720, 700...

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Multiplication & Division - Spring Year 5

# Distributive Law

If you didn't know  $7 \times 8$ , you could do  $5 \times 8$  and add the answer to  $2 \times 8$ . You would get the correct answer!

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I have 'distributed' (spread out) the 7 into a 5 and a 2 and multiplied them both by 8. I then add the products.

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Year 5 – Multiplication and Division Vocabulary Assessment

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Multiplication		Multiply		Divide	
Arrays		Equal Groups		Division Facts	
Multiplier		Multiplicand		Product	
Divisor		Dividend		Quotient	
Area Model		Long Multiplication		Short Division	
Long Division		Remainder		Multiples	
Factors		Distributive Law		Integer	
Place Holder		Partitioning		Exchange	
Ascending		Descending		Consecutive	

Year 5 – Multiplication and Division Vocabulary Assessment

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Multiplication		Multiply		Divide	
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Year 5 – Multiplication and Division Vocabulary Assessment

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