

24.01.22

LO: To multiply a 4-digit number by a 1-digit number.

I know that I must use the column method when dealing with multiplication.

I can multiply a 4-digit number by a 1-digit number.

I understand that 0 is used as a place holder when there are no digits in a place value column.

Flashback 4.

Flashback 4

Year

- 1) Change $\frac{11}{3}$ to a mixed number.
- 2) Complete $\frac{7}{10} = \frac{\square}{30}$
- 3) Work out 165×7
- 4) Annie has £27. She spends £4.50
How much money does she have left?

Flashback 4

1) Change $\frac{11}{3}$ to a mixed number.

2) Complete $\frac{7}{10} = \frac{\square}{30}$

3) Work out 165×7

4) Annie has £27. She spends £4.50
How much money does she have left?



GET READY

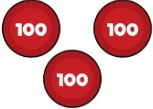


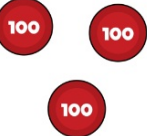


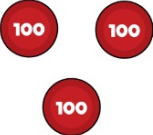


1) $20 + 20 + 20 + 20 =$

2) $4 \times 20 =$

3) $4 \times 200 =$

4) $4 \times 400 =$

Place Value Grid

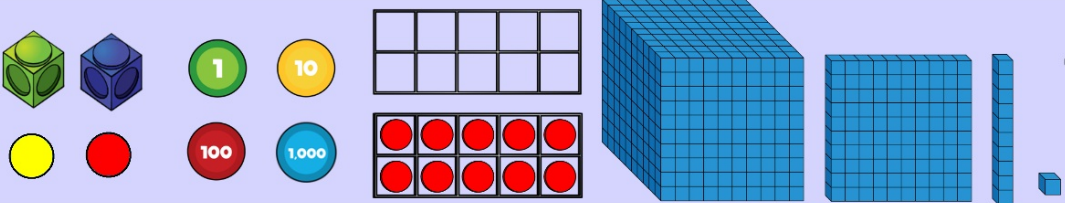
Thousands	Hundreds	Tens	Ones
			
			
			

Calculation



Calculating 321×4 .

	H	T	O
	3	2	1
×			3
<hr/>			


+ - ÷ ×
> < =

Place Value Grid

Thousands	Hundreds	Tens	Ones
	100	10 10 10	1 1 1 1
	100	10 10 10	1 1 1 1
	100	10 10 10	1 1 1 1

Calculation



On whiteboards, use the place value grid to help you calculate 133×3 .

\times

H	T	O
1	3	3
		3



Calculate $3,223 \times 3$

Thousands	Hundreds	Tens	Ones

Th	H	T	O
3	2	2	3
			3




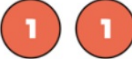











TA group to use place value charts and manipulatives to multiply 3-digits by 1-digit.

What is this question asking us to do?

There are 2,114 seats in a theatre. The theatre is fully booked for 3 shows. How many people attend overall?

What do you notice about the ones column?





























$$2,114 \times 3$$

Thousands	Hundreds	Tens	Ones
			 
			 
			 

×

Th	H	T	O
2	1	1	4
			3
<hr/>			

Place Value Grid


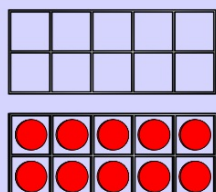
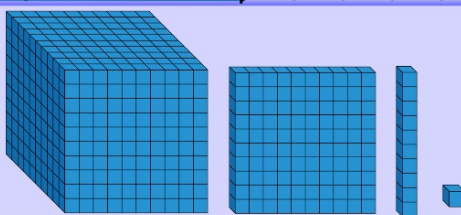
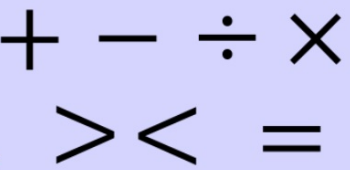
Thousands	Hundreds	Tens	Ones
	 		  
	 		  
	 		  
	 		  

Calculation



On whiteboards, have a go at calculating $1,213 \times 4$.

	Th	H	T	O
	1	2	1	3
\times				4
<hr/>				

On whiteboards:

$$2,420 \times 4 = 968$$



Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100	10 10	
1000 1000	100 100 100 100	10 10	
1000 1000	100 100 100 100	10 10	
1000 1000	100 100 100 100	10 10	

X

Th	H	T	O
2	4	2	0
			4

Have a go at questions 1 - 4.

1 Complete the sentences to describe the multiplication.

Th	H	T	O
1000 1000	100 100	10	1 1 1
1000 1000	100 100	10	1 1 1
1000 1000	100 100	10	1 1 1

There are ones altogether.

There are tens altogether.

There are hundreds altogether.

There are thousands altogether.

$2,213 \times 3 =$

2 Complete the multiplication.

Use a place value chart to help you.

		2	1	0	2
	x				4

3 A football stadium holds 2,214 people.

The stadium is full for 4 matches in a row.

What was the attendance for all 4 matches?

4 Nijah is calculating $2,430 \times 3$

She makes this place value chart to help her.

Th	H	T	O
	100 100	10 10	1 1
	100 100	10 10	1 1
	100 100	10 10	1 1

She gets the answer 729

What mistake has Nijah made?

What is the correct answer?

5 Complete the multiplications.

a) $3,126 \times 3 =$

c) $4,132 \times 6 =$

b) $4,812 \times 2 =$

d) $1,502 \times 5 =$

7 Work out these multiplications.

$2,846 \times 2$

$2,846 \times 4$

$2,846 \times 8$

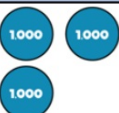


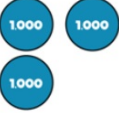


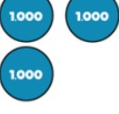

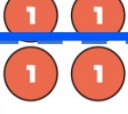
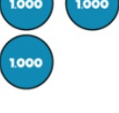
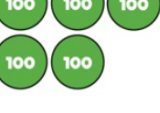

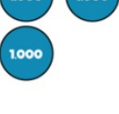
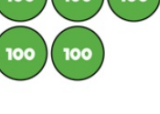
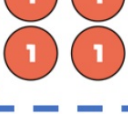
What do you notice about the answers?

5 B's
Brair
Book
Boar
Buda
Boss

HA to start from question 2.

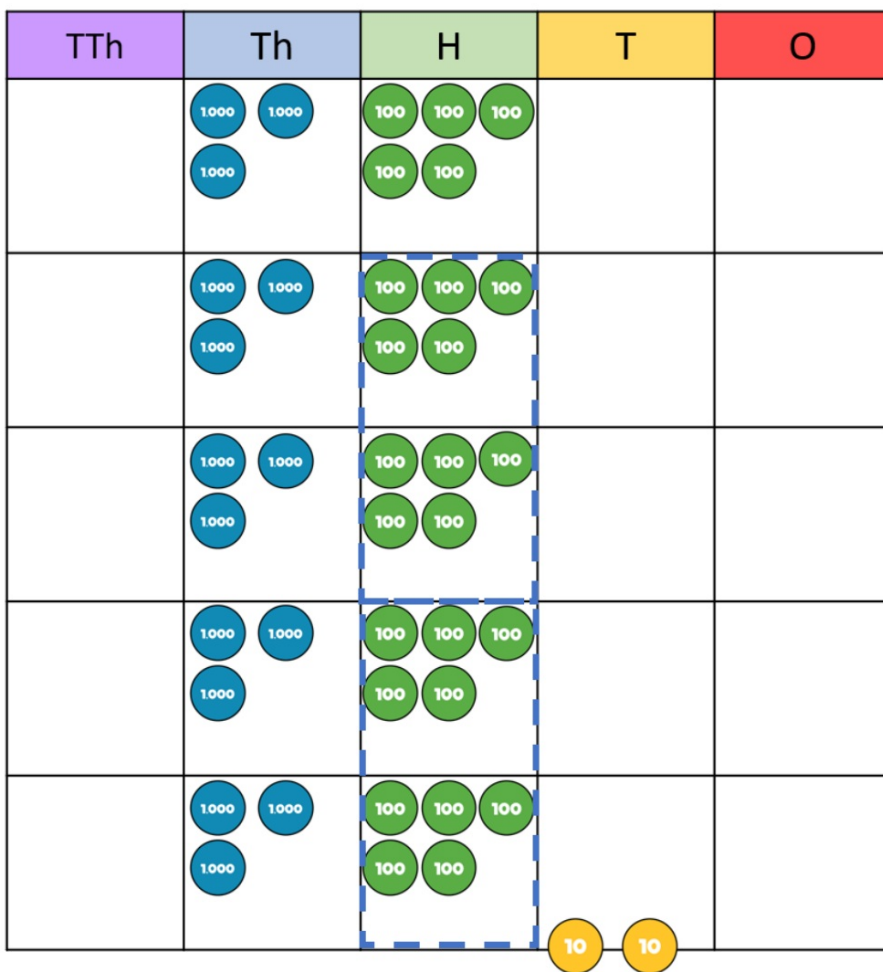
What do we need to do with the ones column?

$3,504 \times 5$

TTh	Th	H	T	O
				
				
				
				
				

TTh	Th	H	T	O
	3	5	0	4
				5

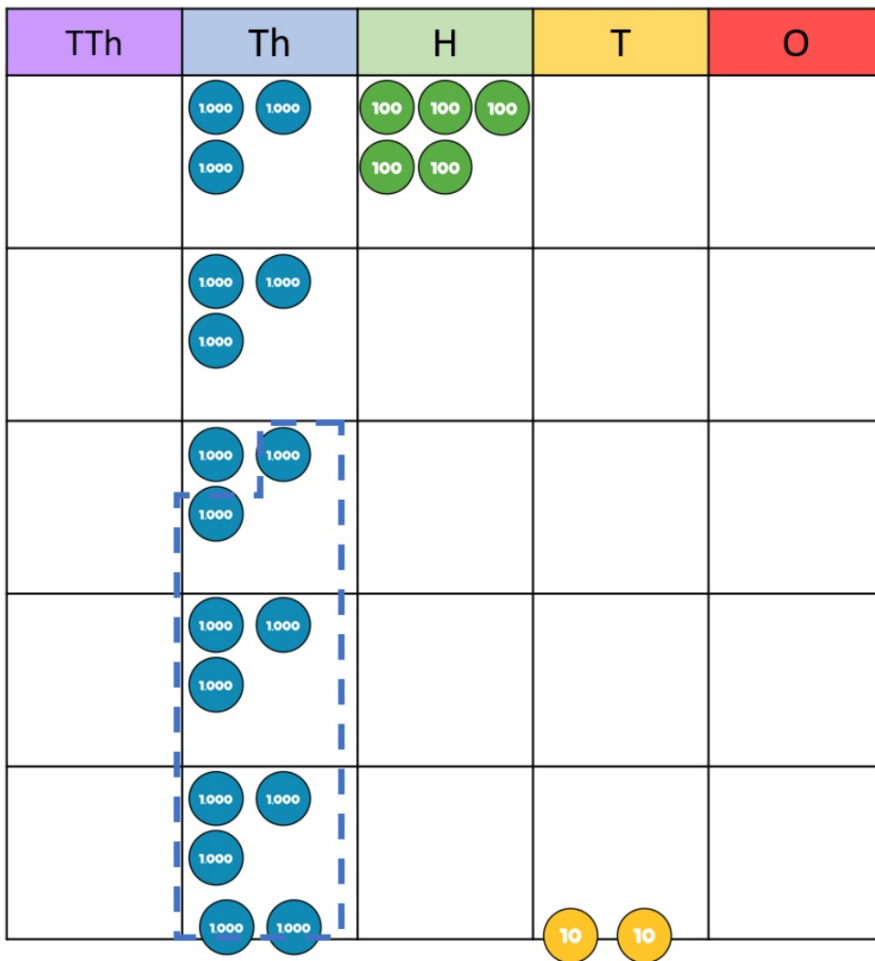
Next, what do we do with these hundreds?



$$3,504 \times 5$$

TTh	Th	H	T	O
	3	5	0	4
				5
			2	0
			2	

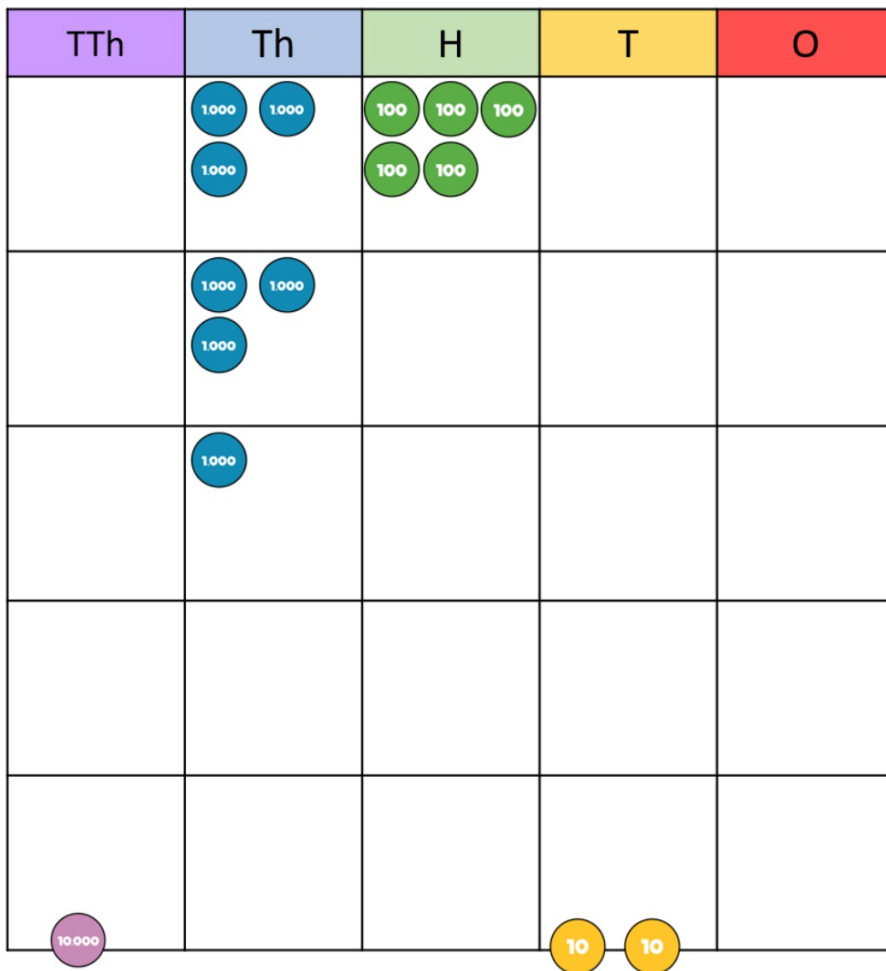
Finally, what do we do with these thousands?



$$3,504 \times 5$$

TTh	Th	H	T	O
	3	5	0	4
				5
		5	2	0
	2		2	

Looking at the place value chart, what will the answer be?



$$3,504 \times 5$$

TTh	Th	H	T	O
	3	5	0	4
				5
1	7	5	2	0
1	2		2	

Have a go at questions 5 and 6.

1 Complete the sentences to describe the multiplication.

Th	H	T	O
1000 1000	100 100	10	1 1 1
1000 1000	100 100	10	1 1 1
1000 1000	100 100	10	1 1 1

There are ones altogether.

There are tens altogether.

There are hundreds altogether.

There are thousands altogether.

$2,213 \times 3 =$

2 Complete the multiplication.

Use a place value chart to help you.

		2	1	0	2			
	x				4			

3 A football stadium holds 2,214 people.

The stadium is full for 4 matches in a row.

What was the attendance for all 4 matches?

4 Nijah is calculating $2,430 \times 3$

She makes this place value chart to help her.

Th	H	T	O
	100 100	10 10	1 1
	100 100	10 10	1 1
	100 100	10 10	1 1

She gets the answer 729

What mistake has Nijah made?

What is the correct answer?

5 Complete the multiplications.

a) $3,126 \times 3 =$

c) $4,132 \times 6 =$

b) $4,812 \times 2 =$

d) $1,502 \times 5 =$

7 Work out these multiplications.

$2,846 \times 2$

$2,846 \times 4$

$2,846 \times 8$

What do you notice about the answers?

5 B's
Brair
Book
Boar
Buda
Boss

Extension activity:

Alex calculated $1,432 \times 4$

Here is her answer.

	Th	H	T	O
	1	4	3	2
\times				4
	4	16	12	8

$$1,432 \times 4 = 416,128$$

Can you explain what Alex has done wrong?

Can you work out the missing numbers using the clues?

$$\begin{array}{r} \square \square \square \square \\ \times 5 \\ \hline \square \square \square \square \square \end{array}$$

- The 4 digits being multiplied by 5 are consecutive numbers.
- The first 2 digits of the product are the same.
- The fourth and fifth digits of the answer add to make the third.

True or False?

Multiply 4-digits by 1-digit

When using column multiplication, always start with the most significant digit.

	1	2	3	4
×				5
	<hr/>			
	<hr/>			

False

Start with the least significant digit to give space to exchange.

	1	2	3	4
×				5
	<hr/>			
	<hr/>			

**Year 5
NUMERACY
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

Number and Place Value

I can use all 4 rules of number to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract numbers with up more than 4 digits

I can add whole numbers with more than 4 digits.

Addition and Subtraction

I can solve \times and \div problems, scaling by fractions and ratio.

I can solve problems involving \times and \div including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can \times and \div whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

Multiplication and Division

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

Measurements

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

I can compare and order fractions whose denominators are all multiples of the same number.

Fractions

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of 90°

I can identify angles at point on a straight line and $1/2$ a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ($^\circ$)

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

Geometry

I can read and write decimal numbers as fractions.

I can write $\frac{1}{10}$ as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Statistics

25.01.22

LO: To multiply 2-digits by 1-digit using the area model.

I know what Base 10 is and how it can help me understand place value.

I can multiply 2-digits by 1-digit using the area model.

I understand how partitioning can help me with multiplication.

Flashback 4.

Flashback 4

- 1) Complete $2\frac{3}{4} = \frac{\square}{4}$
- 2) Write a fraction equivalent to $\frac{2}{3}$
- 3) Work out 64×23
- 4) What is the value of the 4 in the number

Flashback 4




1) Complete $2\frac{3}{4} = \frac{\square}{4}$

2) Write a fraction equivalent to $\frac{2}{3}$ (

3) Work out 64×23

4) What is the value of the 4 in the nu

GET READY

Thousands	Hundreds	Tens	Ones
			
			
			

1) $2,123 \times 3 =$

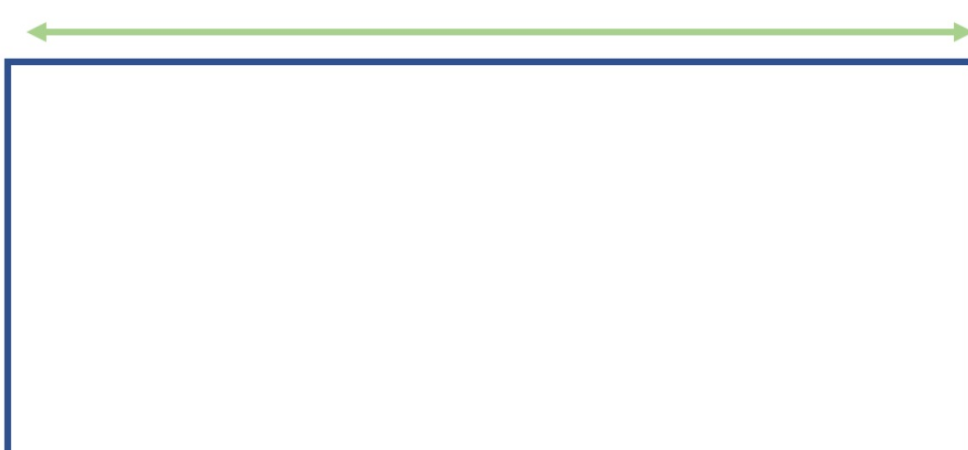
2) $2,123 \times 4 =$

3) $2,124 \times 3 =$

LET'S LEARN

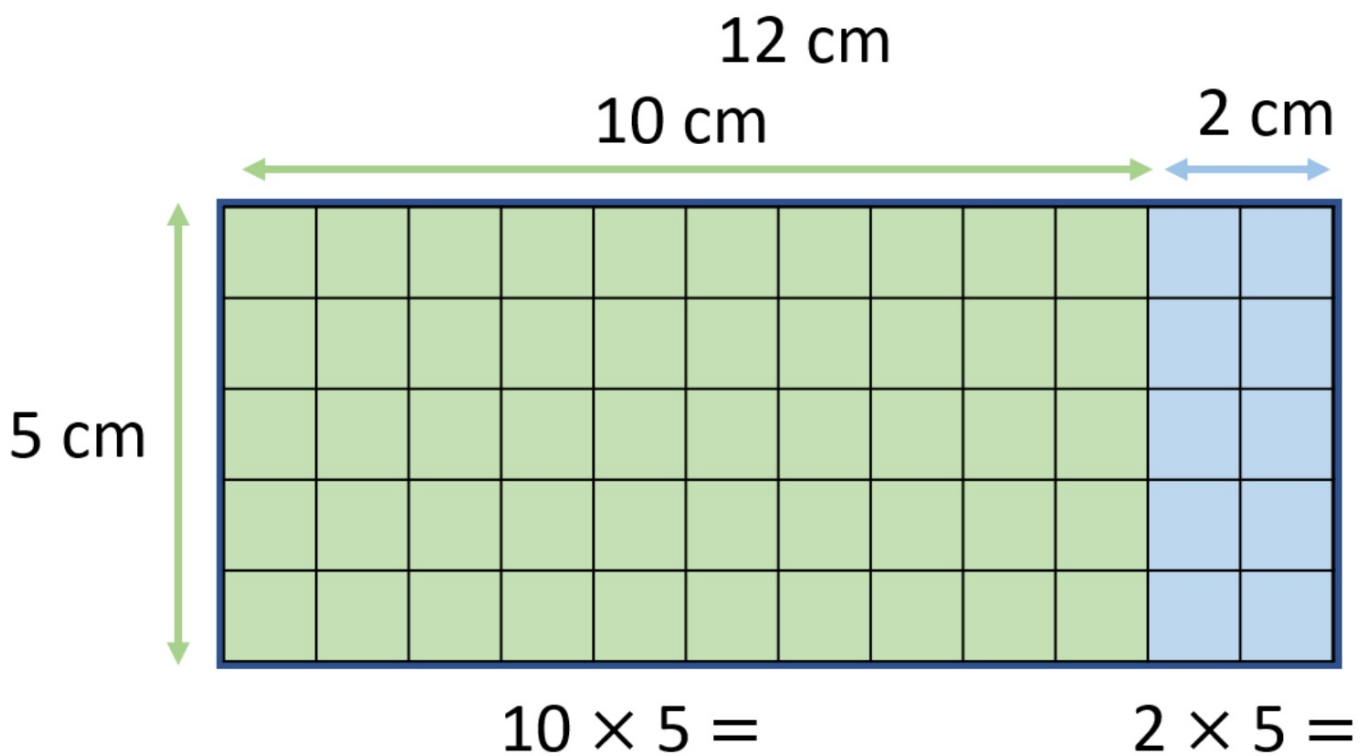
12 cm

5 cm



$$12 \times 5 =$$




We need to partition 12!



What do you think we do with the totals?


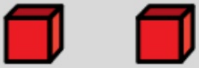

This is another method for multiplication.

10 12 2

×		
5 		

10 12

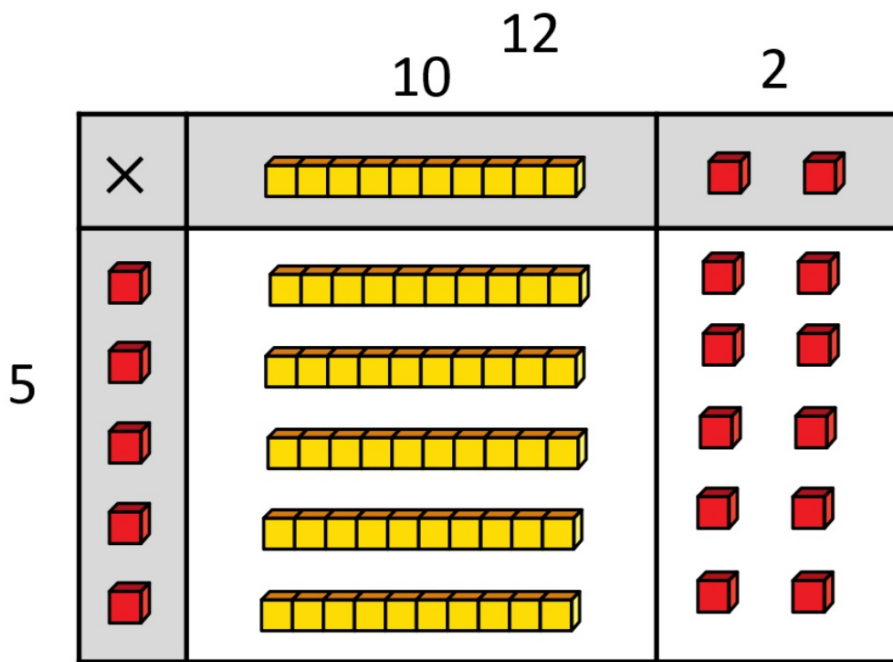
2

×		
5 	$5 \times 10 =$	$2 \times 10 =$

5

$5 \times 10 =$

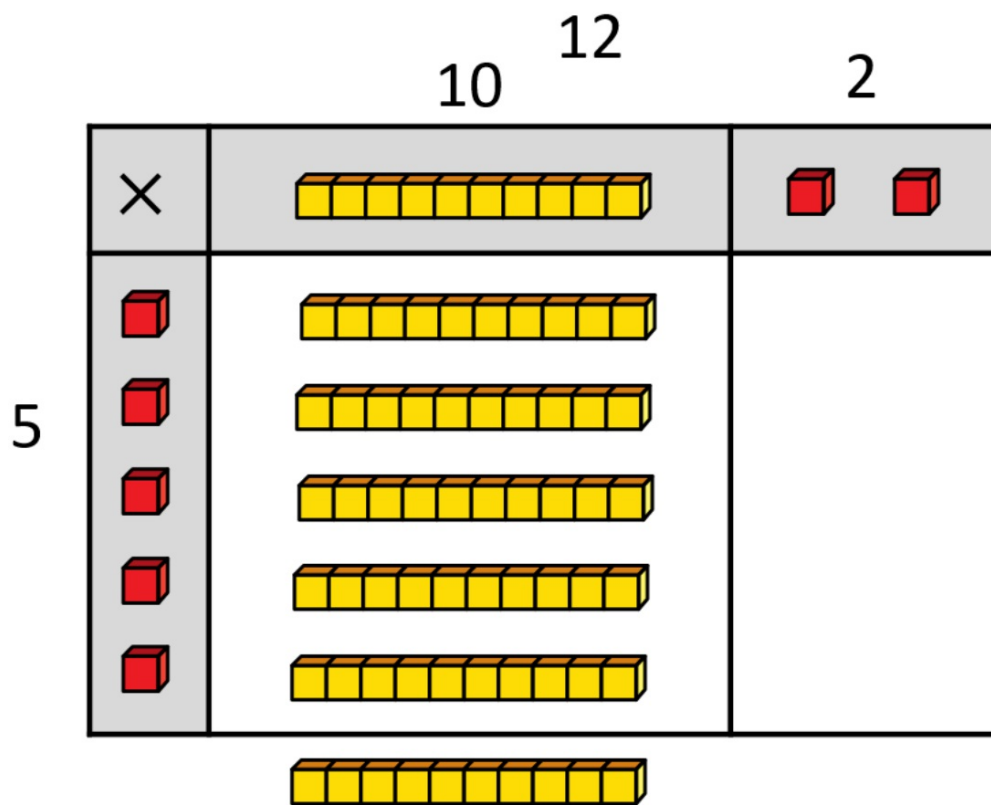
$2 \times 10 =$



There are 10 ones altogether.

There are 5 tens altogether.

What must we do with the 10 ones?






There are 6 tens altogether.

Let's complete this together. Show me the values I need using the dienes on your table.

$$13 \times 4 =$$


10

3




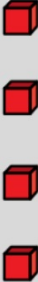
×		
4 		

TA group to work with TA using grid template and dienes on 2-digit by 1-digit.

What do we need to do to solve this problem?

Have a think 

$$4 \times 21 =$$




	20	1	
\times			
4			

Using your whiteboards to draw a grid and dienes, work out this multiplication problem.

$7 \times 16 =$

10

6






\times		
7 		

Draw this chart on whiteboards and let's work it out together.

$$14 \times 21 =$$

20

1

\times			
10 			
4 			










$42 \times 32 =$

Have a think



40

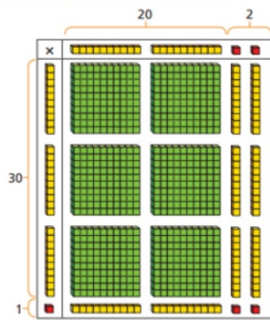
2

Have a go at the questions.

1 Kim is using base 10 to work out 31×22

Use Kim's model to help you complete the sentences.



There are ones altogether.

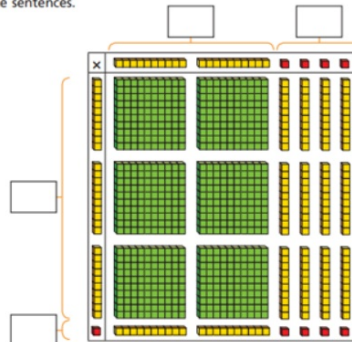
There are tens altogether.

There are hundreds altogether.

Work out the multiplications.

3 Amir is using base 10 to calculate 31×24

a) Add the missing information to the area model and complete the sentences.



There are ones altogether.

There are tens altogether.

There are hundreds altogether.

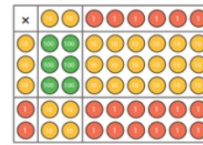
c) Work out the multiplication.

31×24

4 Use base 10 to work out these multiplications.

a) 25×15 b) 36×12

5 Use the place value counters to complete the multiplication grid and sentence.



x	20	6
30		
2		

$26 \times 32 =$

6 Use an area model to help you complete the multiplication.

a) $28 \times 14 =$

c) $35 \times 22 =$

x	20	8
10		
4		

b) $27 \times 16 =$

d) $45 \times 36 =$

x		

complete

5 B's:
Brain
Book
Board
Buddy
Boss

Extension activity:

Eva says,



To multiply 23 by 57 I just need to calculate 20×50 and 3×7 and then add the totals.

What mistake has Eva made?
Explain your answer.

Amir hasn't finished his calculation.
Complete the missing information and record the calculation with an answer.

×	40	2
40		
6		

Farmer Ron has a field that measures 53 m long and 25 m wide.

Farmer Annie has a field that measures 52 m long and 26 m wide.

Dora thinks that they will have the same area because the numbers have only changed by one digit each.

Do you agree? Prove it.

True or False ?

Multiply 2-digits (area model)



Mo has multiplied 37 by 23 correctly.

×	30	7
20	60	14
3	120	21

		6	0
		1	4
	1	2	0
+		2	1
	2	1	5

True or False ?

Multiply 2-digits (area model)

False

$$30 \times 20 = 600$$

$$20 \times 7 = 140$$

×	30	7
20	600	140
3	90	21

	6	0	0
	1	4	0
		9	0
+		2	1
	8	5	1

**Year 5
NUMERACY
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

Number and Place Value

I can use all 4 rules of number to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract numbers with up more than 4 digits

I can add whole numbers with more than 4 digits.

Addition and Subtraction

I can solve \times and \div problems, scaling by fractions and ratio.

I can solve problems involving \times and \div including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can \times and \div whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

Multiplication and Division

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

Measurements

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

I can compare and order fractions whose denominators are all multiples of the same number.

Fractions

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of 90°

I can identify angles at point on a straight line and $1/2$ a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ($^\circ$)

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

Geometry

I can read and write decimal numbers as fractions.

I can write $\frac{1}{10}$ as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Statistics

26.01.22

LO: To multiply 2-digits by 2-digits.

I know that formal multiplication methods must be set out with digits in the correct place value columns.

I can multiply 2-digits by 2-digits.

I understand what the role and importance of 0 in long multiplication.

Flashback 4.

Flashback 4

Year 5 |

- 1) Change $\frac{18}{5}$ to a mixed number
- 2) Complete $\frac{15}{20} = \frac{\square}{4}$
- 3) Work out $3,157 \times 4$
- 4) Add together 6,483 and 1,999

Flashback 4

Year 5

1) Change $\frac{18}{5}$ to a mixed number

2) Complete $\frac{15}{20} = \frac{\square}{4}$

3) Work out $3,157 \times 4$

4) Add together 6,483 and 1,999

GET READY

1) $3 \times 8 =$

$30 \times 8 =$

2) $6 \times 7 =$

$6 \times \square = 420$

3) $22 \times 13 =$

4) $22 \times 14 =$

×		

LET'S LEARN

$$23 \times 31$$

\times	20	3
30		
1		

	H	T	O
		2	3
\times		3	1
<hr/>			
<hr/>			

Discuss partitioning in the area model.

Why do you think we need a 0
when using this column method?

	H	T	O
		2	3
×		3	1
<hr/>			
		2	3
+	6	9	0
<hr/>			
	7	1	3
	1		

On whiteboards, have a go at this calculation. Draw out both methods to help you with each step.

$$43 \times 21$$

×		

	H	T	O
×			

Do you think we will need to exchange?

$$41 \times 26$$

	H	T	O
		4	1
×		2	6
<hr/>			
+			
<hr/>			

$$(41 \times 6)$$

$$(41 \times 20)$$

What has been forgotten?

$$32 \times 46 = 320$$



	Th	H	T	O
			3	2
			4	6
×				
		1	9	2
		1	2	8
+				
		3	2	0
		1	1	

Have a go on whitboards to complete the calculation.

	Th	H	T	O
			3	2
			4	6
×	<hr/>			
+	<hr/>			

(32 × 6)

(32 × 40)

Have a go at questions 1-4.

5 B.
Brain
Boon
Boa
Bud
Bos.

1 Work out the multiplications.

- a) 6×6 c) 32×3 e) 21×4
 6×60 32×30 21×40
 b) 12×8 d) 7×9 f) 48×3
 12×80 7×90 48×30

How did you work out your answers?

2 Fill in the missing numbers.

a)

		4	3
x		1	3
	1	2	9
	4	3	0

(43×3)

(43×10)

c)

x				
	1	0	5	
	4	2	0	

(21×5)

(21×20)

b)

			2	1
x			1	6
	1	2	6	
	2	1	0	

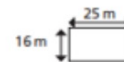
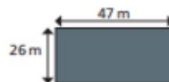
(\times)

(\times)

3 Mo is calculating 34×23 . Here is his working. What mistake has Mo made? What is the correct answer?

$$\begin{array}{r} 34 \\ \times 23 \\ \hline 102 \\ 68 \\ \hline 170 \end{array}$$

6 Here are two rectangles.



a) What is the area of this compound shape?



b) What is the area of the shaded part?



Compare methods and answers with a partner. What is the same and what is different?

Extension activity:

Tommy says,



Do you agree?
Explain your answer.

It is not possible to make 999 by multiplying two 2-digit numbers.

Amir has multi



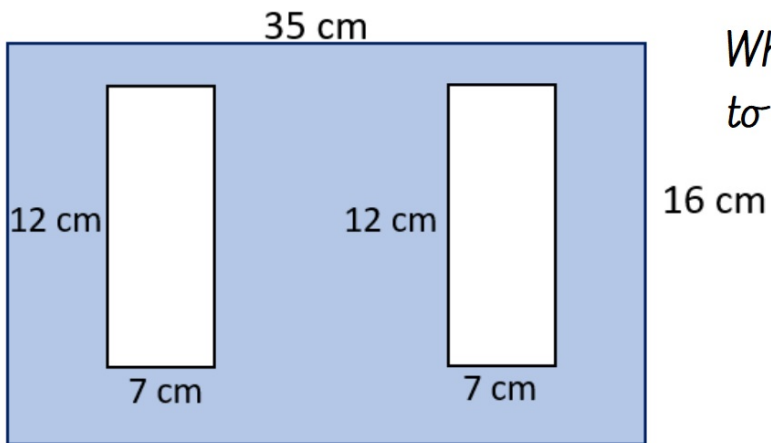
Alex says,



Who is correct?
What mistake h



Tommy wants to find the area of the blue part of the rectangle.



Which two numbers do we need to multiply together first?

What comes next?

A simple red rectangular box with a thin border, intended for the student to write their answer to the question above.

Have a go at questions 5 and 6!

5 B.
Brain
Boon
Boa
Bud
Bos.

1 Work out the multiplications.

- a) 6×6 c) 32×3 e) 21×4
 6×60 32×30 21×40
 b) 12×8 d) 7×9 f) 48×3
 12×80 7×90 48×30

How did you work out your answers?

2 Fill in the missing numbers.

a)

		4	3
x		1	3
	1	2	9
	4	3	0

(43×3)

(43×10)

c)

x				
	1	0	5	
	4	2	0	

(21×5)

(21×20)

b)

		2	1	
x		1	6	
	1	2	6	
	2	1	0	

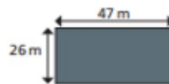
(\times)

(\times)

3 Mo is calculating 34×23 . Here is his working. What mistake has Mo made? What is the correct answer?

$$\begin{array}{r} 34 \\ \times 23 \\ \hline 102 \\ 68 \\ \hline 170 \end{array}$$

6 Here are two rectangles.



a) What is the area of this compound shape?



b) What is the area of the shaded part?



Compare methods and answers with a partner. What is the same and what is different?

Extension activity:

Tommy says,



Do you agree? Explain your answer.

It is not possible to make 999 by multiplying two 2-digit numbers.

Amir has multiplied



Alex says,



Who is correct? What mistake has

Extension activity:

Tommy says,



It is not possible to make 999 by multiplying two 2-digit numbers.

Do you agree?
Explain your answer.

Amir has multiplied 47 by 36



		4	7
x		3	6
	2	8	2
	1	4	1
	3	2	3

Alex says,



Amir is wrong because the answer should be 1,692 not 323

Who is correct?
What mistake has been made?

True or False ?

Multiply 2-digits by 2-digits

These calculations will both give the same answer.

	5	2
×	6	4
<hr/>		
<hr/>		

	6	4
×	5	2
<hr/>		
<hr/>		

True or False ?

Multiply 2-digits by 2-digits

True

	5	2
×	6	4
<hr/>		
<hr/>		

Multiplication is commutative.

	6	4
×	5	2
<hr/>		
<hr/>		

**Year 5
NUMERACY
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

Number and Place Value

I can use all 4 rules of number to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract numbers with up more than 4 digits

I can add whole numbers with more than 4 digits.

Addition and Subtraction

I can solve \times and \div problems, scaling by fractions and ratio.

I can solve problems involving \times and \div including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can \times and \div whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

Multiplication and Division

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

Measurements

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

Fractions

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of 90°

I can identify angles at point on a straight line and $1/2$ a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ($^\circ$)

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

Geometry

I can read and write decimal numbers as fractions.

I can write $\frac{1}{10}$ as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Statistics

27.01.22

LO: To multiply 4-digits by 2-digits.

I know that formal multiplication methods must be set out with digits in the correct place value columns.

I can multiply 4-digits by 2-digits.

I understand what the role and importance of 0 in long multiplication.

Flashback 4.

Flashback 4

- 1) Complete the sequence $1\frac{2}{5}, 1\frac{3}{5}, \dots$
- 2) Write $\frac{17}{3}$ as a mixed number.
- 3) Divide 865 by 5
- 4) Write down a 5-digit number with a 6 hundreds column.



GET READY

1) $1 \times 415 =$

2) $100 \times 415 =$

3) $200 \times 415 =$

4) $415 \times 201 =$



$2,313 \times 32 =$

	TTh	Th	H	T	O
		2	3	1	3
×				3	2
<hr/>					
+					
<hr/>					

$(\underline{2,313} \times \underline{2})$

$(\underline{2,313} \times \underline{30})$

$$6,324 \times 33 =$$

	TTh	Th	H	T	O
		6	3	2	4
×				3	3
<hr/>					
+					
<hr/>					

$$(\underline{6,324} \times \underline{3})$$

$$(\underline{6,324} \times \underline{30})$$

On your whiteboards.

$$4,145 \times 52 =$$

Have a think




	TTh	Th	H	T	O
		4	1	4	5
×				5	2
<hr/>					
+					
<hr/>					

(_____ × _____)


(_____ × _____)

$$4,145 \times 52 =$$

Have a think 

	TTh	Th	H	T	O		
		4	1	4	5		
×				5	2		
<hr/>							
		8	2	1 9	0	(<u>4,145</u> × <u>2</u>)	
+	2	0	2 7	2 2	5	0	(<u>4,145</u> × <u>50</u>)
<hr/>							
	2	1	5	5	4	0	
		1		1			

Can you spot the three errors?

Have a think 

	TTh	Th	H	T	O	
		5	4	0	2	
×				2	4	
<hr/>						
	2	1	6	4	8	(<u>5,402</u> × <u>4</u>)
	2	1				
+	1	0	8	2	4	(<u>5,402</u> × <u>20</u>)
<hr/>						
	3	2	4	7	2	

Can you explain why these are errors?

Have a go at the questions.

1 Complete the calculations.

a)

			2	4	3	3			
	x				1	2			
			4	8	6	6			
	+	2	4	3	3	0			

(2,433 x)

(2,433 x)

b)

			2	4	3	3			
	x				1	7			
			1	7	0	3	1		
	+	2	4	3	3	0			

(2,433 x)

(2,433 x)

2 Complete the multiplications.

a)

				1	3	4	5		
	x					2	5		

(x)

(x)

b)

				5	0	1	2		
	x					1	9		

(x)

(x)

c)

				2	7	0	8		
	x					3	4		

(x)

(x)

3 Work out the multiplications.

a) $4,511 \times 23$

d) $8,001 \times 26$

b) $5,037 \times 15$

e) $9,261 \times 11$

c) $74 \times 1,156$

f) $49 \times 3,860$

4 Find the product of 5,604 and 81

5 A shop buys football shirts for £39 each and sells them for £49 each.

a) The shop buys 2,700 football shirts.
How much does it cost?

b) The shop sells all the football shirts.
How much profit does it make?

Could you have worked it out a different way?

5 B's:
Brain
Book
Board
Buddy
Boss

Extension activity:

Spot the Mistakes

Can you spot and correct the errors in the calculation?

			2	5	3	4	
x					2	3	
			1	7	5	9	2
			1	5	0	6	8
	1	2	1	6	1	6	0

Teddy has sp calculation.

	x						

What are the
What do you

Extension activity:

Spot the Mistakes

Can you spot and correct the errors in the calculation?

		2	5	3	4		
x				2	3		
		1	7	5	1	9	2
		1	5	0	6	8	
	1	2	1	6	1	6	0

Teddy has spilt some paint on his calculation.

		2	6	9		
x			2			
	2	2	9	5	2	
	1	5	1	7	3	0
	1	0	1	3	3	2

What are the missing digits?

What do you notice?

True or False?

Multiply 4-digits by 2-digits
- basic practice

		5	2	0	1	
	×			3	4	
		2	0	8	0	4
		1	5	6	0	3
		3	6	4	0	7
			1			

$$5,201 \times 34 = 36,407$$

True or False ?

Multiply 4-digits by 2-digits
- basic practice

False

5,201 has been multiplied by 4 and 3
rather than 4 and 30

$$5,201 \times 34 = 176,834$$

**Year 5
NUMERACY
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

Number and Place Value

I can use all 4 rules of number to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract numbers with up more than 4 digits

I can add whole numbers with more than 4 digits.

Addition and Subtraction

I can solve \times and \div problems, scaling by fractions and ratio.

I can solve problems involving \times and \div including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can \times and \div whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

Multiplication and Division

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

Measurements

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

Fractions

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of 90°

I can identify angles at point on a straight line and $1/2$ a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ($^\circ$)

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

Geometry

I can read and write decimal numbers as fractions.

I can write $\frac{1}{10}$ as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Statistics

28.01.22

Arithmetic LO: To compare and order numbers.

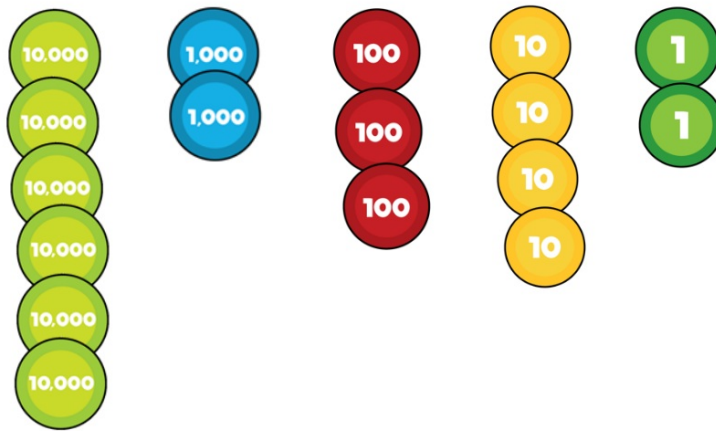
I know that the value of a digit differs depending on its place value.

I can compare and order numbers.

I understand what the terms ascending and descending mean and how to order numbers accordingly.

Make a Number

If I had:



What number do I have?

How many thousands does this number have?

A toolbar containing various mathematical and real-world objects for a problem-solving activity:

- Four colored cubes (green, blue, red, yellow).
- Three colored circles (red, yellow, white).
- Two wrapped candies (red and green).
- An apple.
- Three blue base-ten blocks: a single unit cube, a ten rod, and a hundred flat.
- A large blue cube representing 1,000 units.
- A 2x4 grid of empty squares.
- A 2x4 grid of red circles.
- Six colored circles representing place values: 1 (green), 10 (yellow), 100 (red), 1,000 (blue), 10,000 (green), and 100,000 (pink).
- A banana.

Place Value Grid

What is the value of the digit 8?







Thousands			Ones		
H 100,000	T 10,000	O 1,000	H 100	T 10	O 1
3	7	4	8	6	2

What is the value of the digit 3?




















A collection of mathematical manipulatives including base ten blocks (cubes, rods, flats), a ten-frame, and various objects like candies, an apple, and a banana.



















Place Value Grid













What is the value of the digit 4?

Millions			Thousands			Ones		
H	T	O	H 	T 	O 	H 	T 	O 
		2	5	4	8	3	9	6






What is the value of the digit 2?

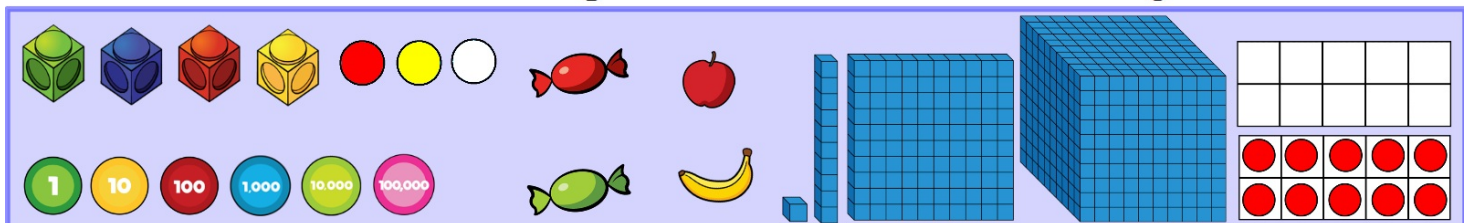



















Place Value Grid

Tth 	Th 	H 	T 	O 
3	7	2	0	6
3	7	3	0	6

Which number has the greatest value? How do you know?



Number Line



On whiteboards, draw out a number line and order these numbers in ascending order.



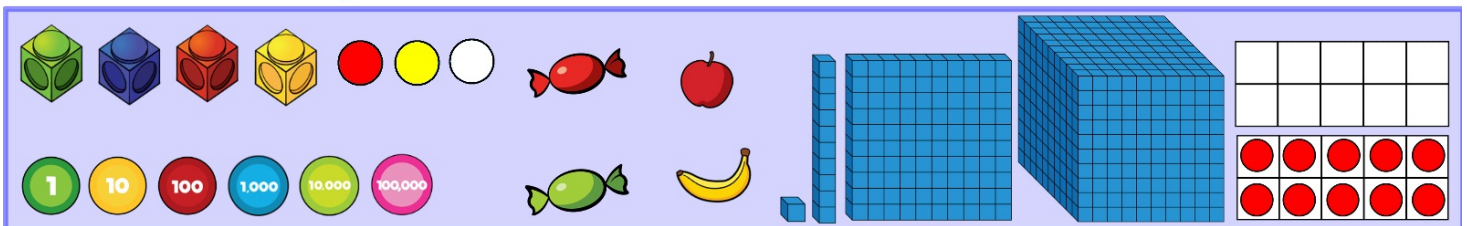
4,607

4,567

4,627

4,587

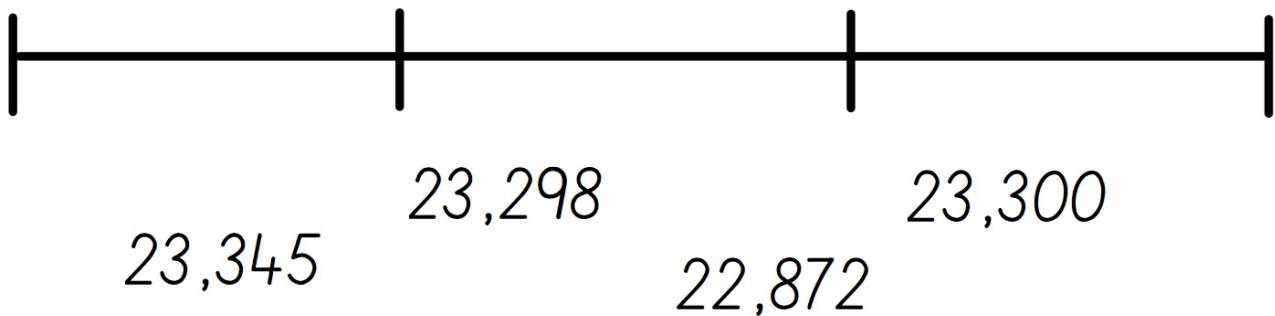
How did you work out the order?



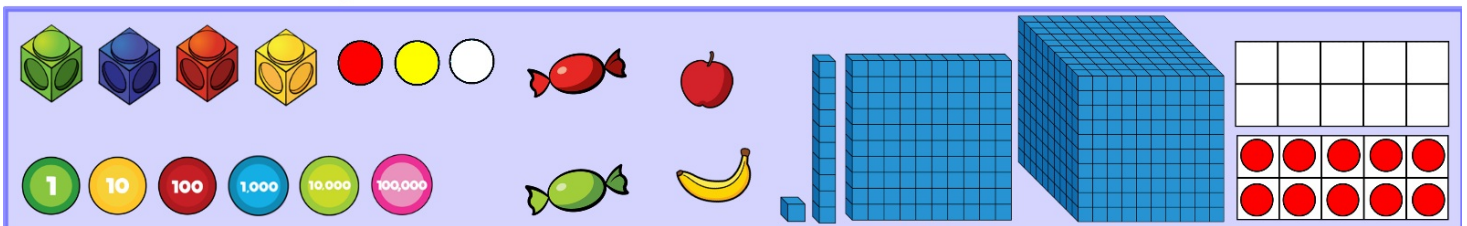
Number Line



On whiteboards, draw out a number line and order these numbers in descending order.



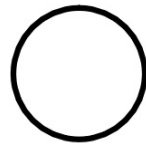
How did you work out the order?



Compare



23,457



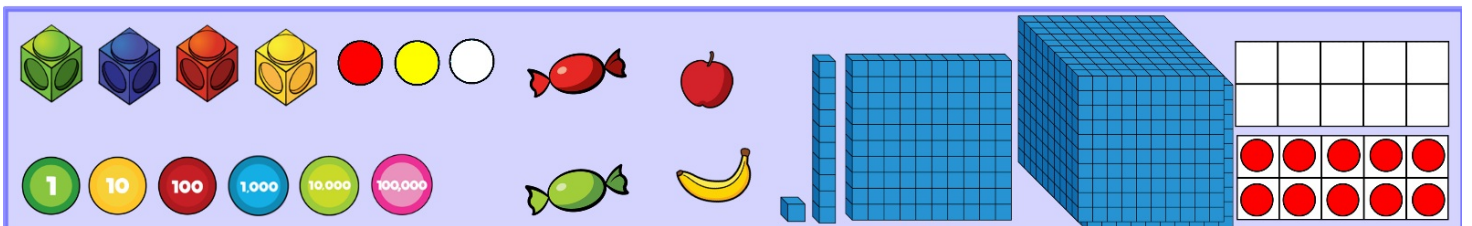
23,486

W.
sh

H.
kr

> greater than = equal to < less than

is _____



Your turn!

1) Place these numbers in ascending order:
35,692 35,612, 36,693 36,650

2) Place these numbers in descending order:
12,825 12,425, 12,625 12,325

3) These numbers are placed in descending order. Are they all in the correct place?



25,452 25,352 25,552 25,252

Explain how you know.

4) Use the correct phrase to complete this number sentence.

45,671 is

45,571.

Greater than

Equal to

Less than

5) Use the correct symbol to complete this number sentence.

553,281

563,281

<

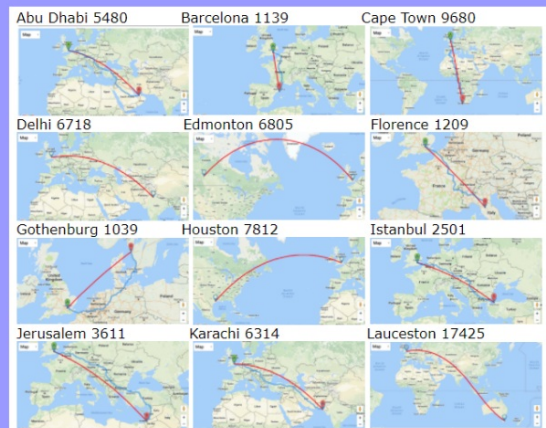
=

>

Explain how you know.

5 B's:
Brain
Book
Board
Buddy
Boss

Extension



Plenary

True or false: you need to look in the hundreds column to compare these two numbers.

Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O
		3	5	7	2	8	6	4

Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O
		3	6	7	2	8	6	4

**Year 5
NUMERACY
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

Number and Place Value

I can use all 4 rules of number to solve multi-step problems.

I can use rounding to check answers to calculations.

I can subtract mentally using increasingly large numbers.

I can add mentally using increasingly large numbers.

I can subtract numbers with up more than 4 digits

I can add whole numbers with more than 4 digits.

Addition and Subtraction

I can solve \times and \div problems, scaling by fractions and ratio.

I can solve problems involving \times and \div including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can \times and \div whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

Multiplication and Division

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

Measurements

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can $+$ and $-$ fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

Fractions

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of 90°

I can identify angles at point on a straight line and $1/2$ a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ($^\circ$)

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

Geometry

I can read and write decimal numbers as fractions.

I can write $\frac{1}{10}$ as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

Statistics