

Mon: mult problems

Tue: short division

Weds- none

Thurs- none-

Fri- Divide a 4 digit no by 1 digit

Mon:

Tues: time difference

Weds: times tables practice $\times 6 \times 3$

Thurs: $\times 10$, 100, 1000

Fri: Key skills

Mon: Key skills

Tues-

Weds-

Week 4

Spring 1 2024 Week 4

White Rose
MATHS

LO: To solve multiplication problems

LO: To understand and use short division

LO: To divide a 4 digit no by 1 digit number

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Mon 29.1.24

LO: To solve problems with multiplication

Do now- write answers in books

1) What are the factors of 12?

2) $100 \times 35 =$

3) $24 \times 12 =$

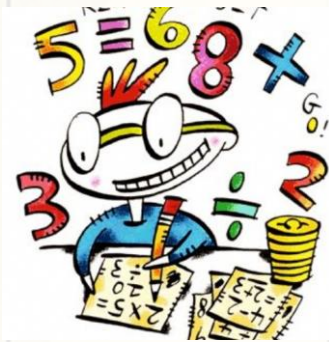
1) What are the factors of 12?

1, 2, 3, 4, 6, 12

2) $100 \times 35 = 3,500$

3) $24 \times 12 =$

Maths Three Repeating Golden Threads



Mastery

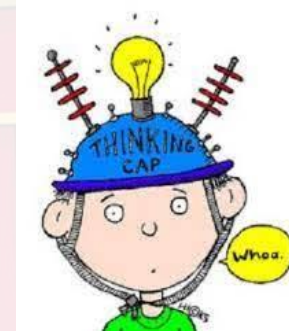
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

The use of maths everyday in the real world, outside the classroom.



Term Spring 1 Week beginning 23.1.23

Block Multiplication and division (B)

Key vocabulary

Multiplication, division, digit, method, place holder, place value, remainder, partition, links to addition/subtraction, estimate, exchange

	WT	EX	S
Multiply up to a 4-digit number by a 1-digit number			
Multiply a 2-digit number by a 2-digit number			
Multiply a 3-digit number by a 2-digit number			
Multiply a 4-digit number by a 2-digit number			
Solve problems with multiplication			
Short division			
Divide a 4-digit number by a 1-digit number			
Divide with remainders			
Efficient division			
Solve problems with multiplication and division			

Stem sentences

- First, I multiply ___ by ___ ones. Then I multiply ___ by ___ tens. Finally, I add together ___ and ___.
- To calculate $\text{___} \times 24$, I can do $\text{___} \times \text{___} \times \text{___}$
- To calculate $9,999 \times \text{___}$, I can do $10,000 \times \text{___} - \text{___}$
- The most efficient strategy to calculate $\text{___} \times \text{___}$ is ...
- ___ hundreds divided by ___ is equal to ___ hundreds with a remainder of ___
- Exchange the remainder, then ___ tens divided by ___ is equal to ___ tens with a remainder of ___
- Exchange the remainder, then ___ ones divided by ___ is equal to ___ ones

Crucial Vocab...

calculation
multiply
problem
factor pair

Mon

calculation
multiply
problem
factor pair

calculation
multiply
problem
factor pair

calculation
multiply
problem
factor pair

calculation
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problem
factor pair

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problem
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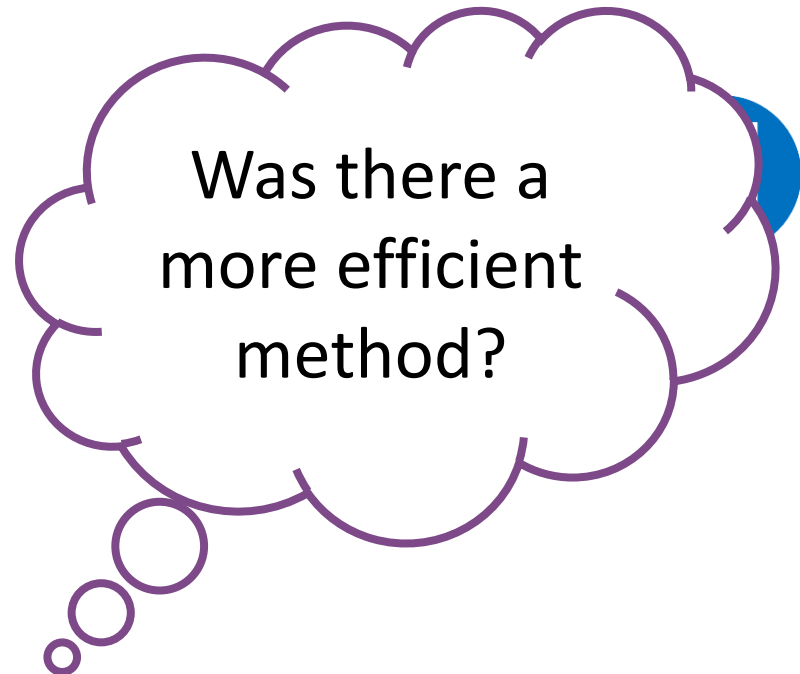
calculation
multiply
problem
factor pair

calculation
multiply
problem
factor pair

Mon

The distance between London and Athens is 1,497 miles. A plane completes 12 flights. How far does the plane travel? **17,964 miles**

	TTh	Th	H	T	O
		1	4	9	7
×				1	2
		2	9 ₁	9 ₁	4
+	1	4	9	7	0
	1	7 ₁	9 ₁	6	4

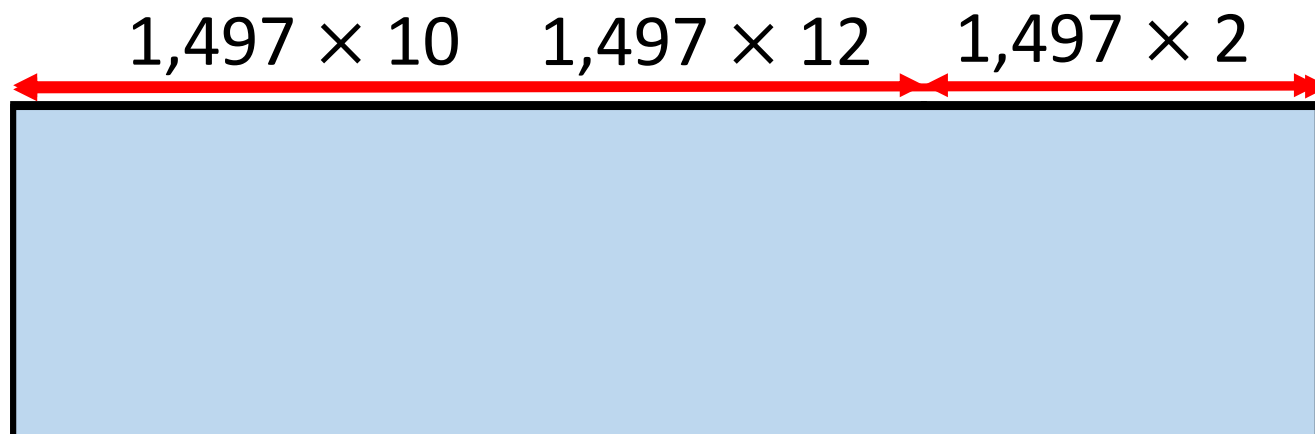


The distance between London and Athens is 1,497 miles. A plane completes 12 flights. How far does the plane travel? **17,964 miles**

$$1,497 \times 10 = 14,970$$

$$1,497 \times 2 = 2,994$$

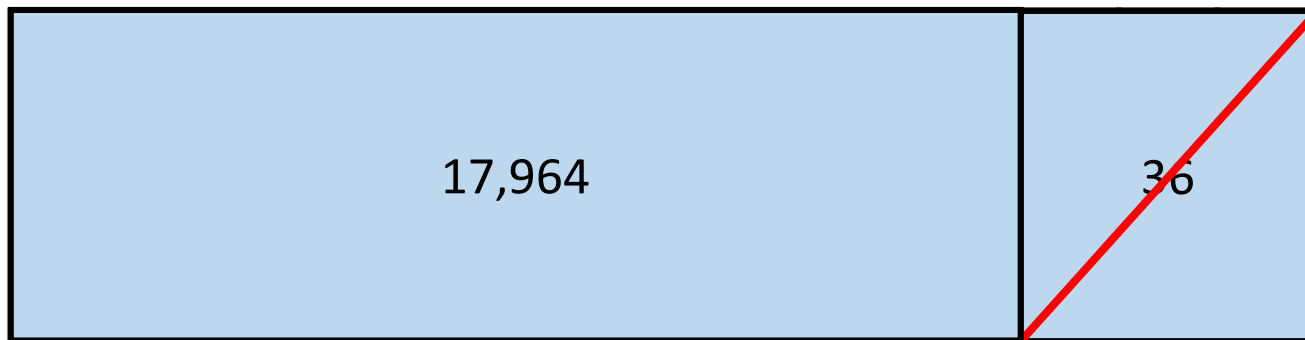
$$14,970 + 2,994 = 17,964$$



The distance between London and Athens is 1,497 miles. A plane completes 12 flights. How far does the plane travel? **17,964 miles**

$$1,500 \times 12 = 18,000$$

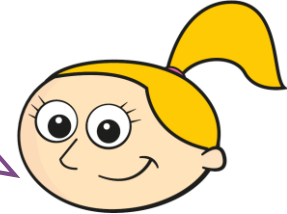
$$18,000 - 36 = 17,964$$



Eva and Mo have worked out 23×99

I used the long multiplication method.

$$23 \times 99 = 2,277$$



Eva



Mo

I calculated 23×100 , which is 2,300
and then subtracted 1 lot of 23 to get
2,277

Explain why both methods work.

Eva and Mo have worked out 23×99

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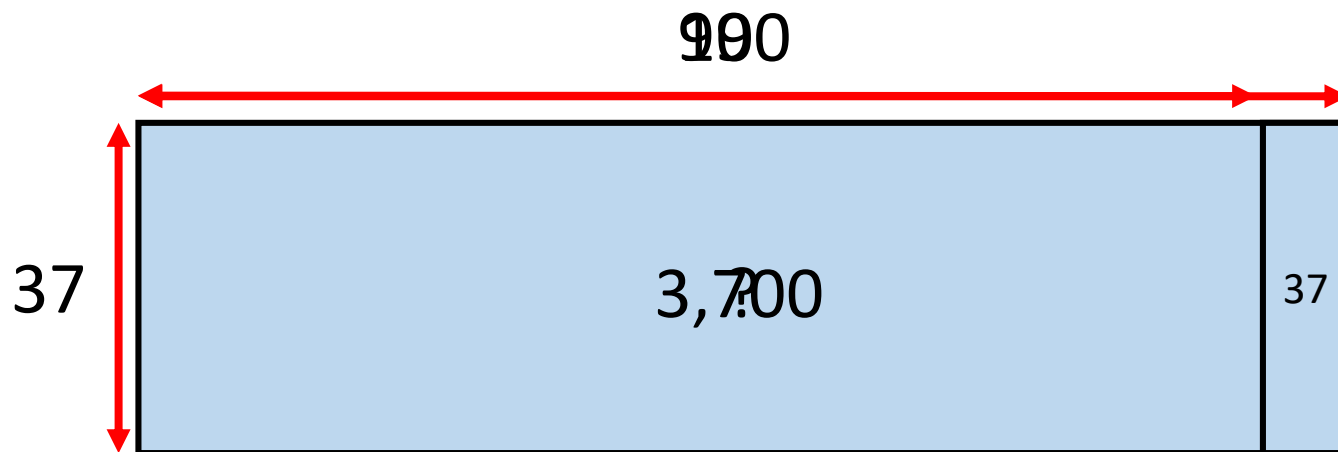


$$37 \times 99$$

$$37 \times 100 = 3,700$$

$$37 \times 99 = 3,663$$

$$3,700 - 37 = 3,663$$



Let's try this one together- Guided

I do

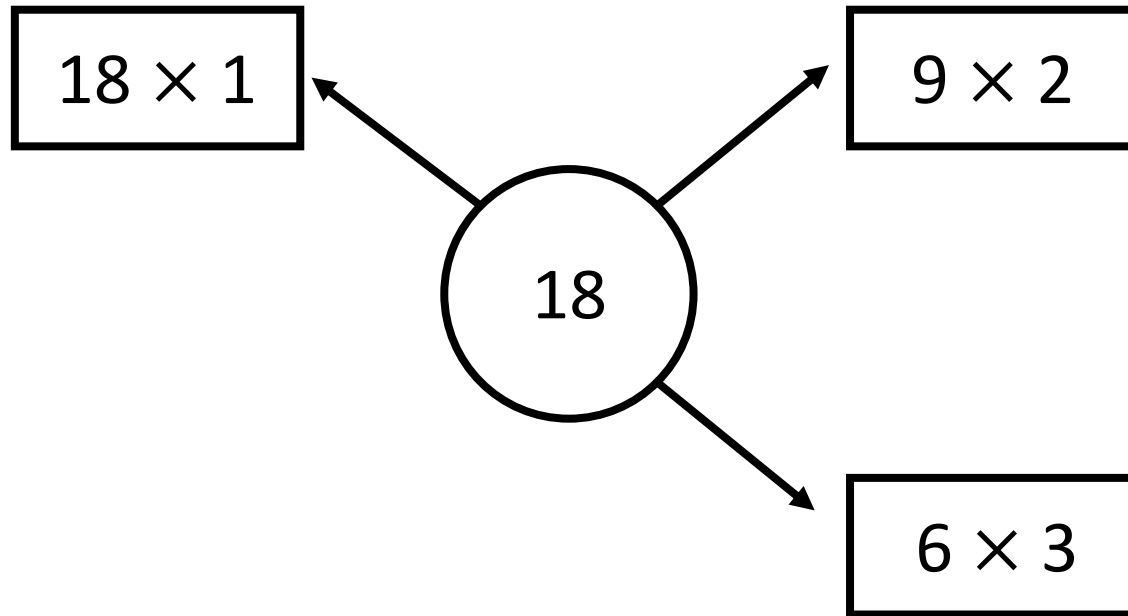
$$32 \times 99$$

You do

$$21 \times 99$$



Here are the factors of 18



How can we use the factors of 18 to calculate
 152×18 ?

Discuss..



3

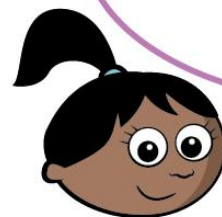
Mo and Sam are using factor pairs to work out 121×12

I can work out
 121×3 first, then
multiply the answer
by 4



Mo

I am going to
work out 121×6
first, then multiply the
answer by 2



Sam

Complete Mo and Sam's workings.

$$121 \times 3 =$$

$$\times 4 =$$

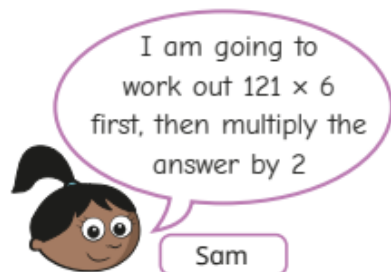
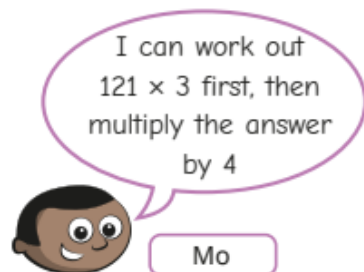
$$\text{So } 121 \times 12 =$$

$$121 \times 6 =$$

$$\times 2 =$$

$$\text{So } 121 \times 12 =$$

- 3 Mo and Sam are using factor pairs to work out 121×12



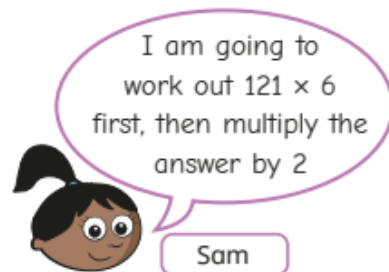
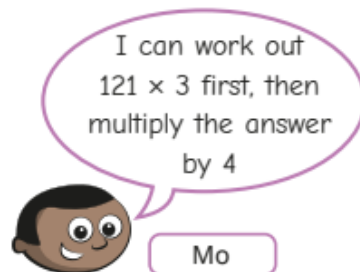
Complete Mo and Sam's workings.

$121 \times 3 =$	
$\times 4 =$	
So $121 \times 12 =$	

$121 \times 6 =$	
$\times 2 =$	
So $121 \times 12 =$	

Mon

- 3 Mo and Sam are using factor pairs to work out 121×12

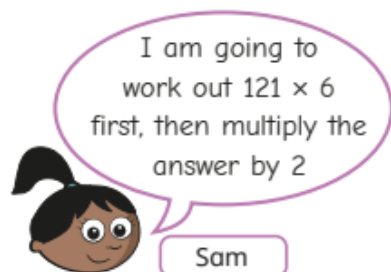
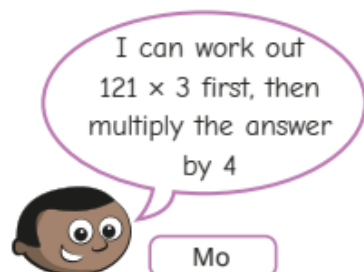


Complete Mo and Sam's workings.

$121 \times 3 =$	
$\times 4 =$	
So $121 \times 12 =$	

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- 3 Mo and Sam are using factor pairs to work out 121×12

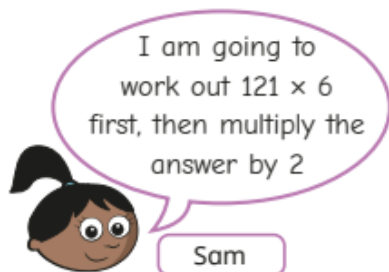
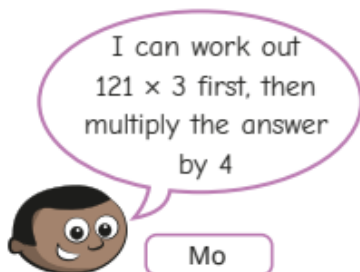


Complete Mo and Sam's workings.

$121 \times 3 =$	
$\times 4 =$	
So $121 \times 12 =$	

$121 \times 6 =$	
$\times 2 =$	
So $121 \times 12 =$	

- 3 Mo and Sam are using factor pairs to work out 121×12



Complete Mo and Sam's workings.

$121 \times 3 =$	
$\times 4 =$	
So $121 \times 12 =$	

$121 \times 6 =$	
$\times 2 =$	
So $121 \times 12 =$	

4 Find all the factor pairs of each number.

a) 8 _____

b) 15 _____



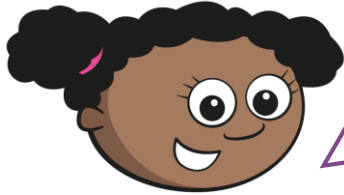
5 Use factor pairs from question 4 to work out the multiplications.

a) $235 \times 8 =$

b) $314 \times 15 =$



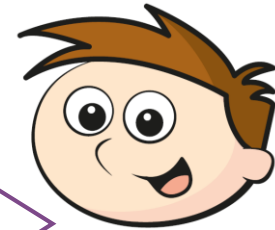
$$152 \times 18 =$$



I multiplied 152 by 6, which is 912
and then multiplied 912 by 3 to get
2,736

Whitney

I multiplied 152 by 9, which is 1,368
and then multiplied 1,368 by 2 to
get 2,736



Teddy

Why do both methods
work?

Use factor pairs to solve this problem.

A machine makes 2,346 bags every day.
How many bags will it make in 3 weeks?

3 weeks = 21 days

$$2,346 \times 3 = 7,038$$

$$7,038 \times 7 = 49,266$$

$$2,346 \times 21 = 49,266$$

$$3 \times 7$$

21

Was there another way to
complete this calculation?

Have a think



A machine makes 2,346 bags every day.
How many bags will it make in 3 weeks?

Mon

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Maths Meeting-Mon

Key skills test



30.1.24 LO: To use short division

True or False?

Multiply 2-digits by 2-digits
(area model)

Amir has multiplied 36 by 27 correctly.

×	30	6
20	60	120
7	210	42

		6	0
	1	2	0
	2	1	0
+		4	2
	4	3	2

1

Stick in books- explain your answer!

True or False?

Multiply 2-digits by 2-digits
(area model)



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×	30	6
20	60	120
7	210	42

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1



True or False?

Multiply 2-digits by 2-digits
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7	210	42

		6	0
	1	2	0
	2	1	0
+		4	2
	4	3	2

1



True or False ?

Multiply 2-digits by 2-digits
(area model)

False

$$30 \times 20 = 600$$

$\times$	30	6
20	600	120
7	210	42

	6	0	0
	1	2	0
	2	1	0
+		4	2
	9	7	2

1

Term Spring 1 Week beginning 23.1.23

Block Multiplication and division (B)

Key vocabulary

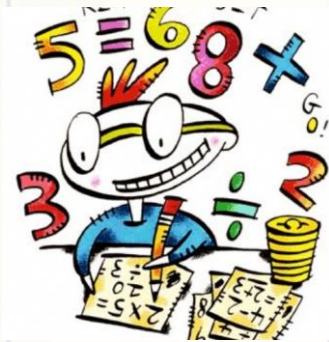
Multiplication, division, digit, method, place holder, place value, remainder, partition, links to addition/subtraction, estimate, exchange

	WT	EX	S
Multiply up to a 4-digit number by a 1-digit number			
Multiply a 2-digit number by a 2-digit number			
Multiply a 3-digit number by a 2-digit number			
Multiply a 4-digit number by a 2-digit number			
Solve problems with multiplication			
Short division			
Divide a 4-digit number by a 1-digit number			
Divide with remainders			
Efficient division			
Solve problems with multiplication and division			

Stem sentences

- First, I multiply ___ by ___ ones. Then I multiply ___ by ___ tens. Finally, I add together ___ and ___.
- To calculate $\text{___} \times 24$, I can do $\text{___} \times \text{___} \times \text{___}$
- To calculate $9,999 \times \text{___}$, I can do $10,000 \times \text{___} - \text{___}$
- The most efficient strategy to calculate $\text{___} \times \text{___}$ is ...
- ___ hundreds divided by ___ is equal to ___ hundreds with a remainder of ___
- Exchange the remainder, then ___ tens divided by ___ is equal to ___ tens with a remainder of ___
- Exchange the remainder, then ___ ones divided by ___ is equal to ___ ones

Maths Three Repeating Golden Threads



Mastery

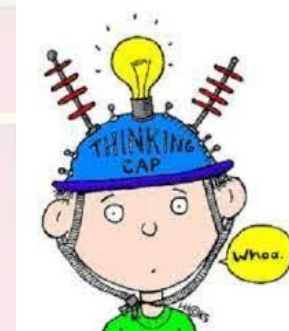
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Quick and. efficient recall of facts and procedures

Application

The use of maths everyday in the real world, outside the classroom.



Crucial Vocab...

short division
partition
remainder
exchange

Tues

short division
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remainder
exchange

short division
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remainder
exchange

short division
partition
remainder
exchange

short division
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remainder
exchange

Tues

1) $40 \div 4 =$

2) $12 \div 4 =$

3) $52 \div 4 =$

4) $84 \div 7 =$

Whiteboards....

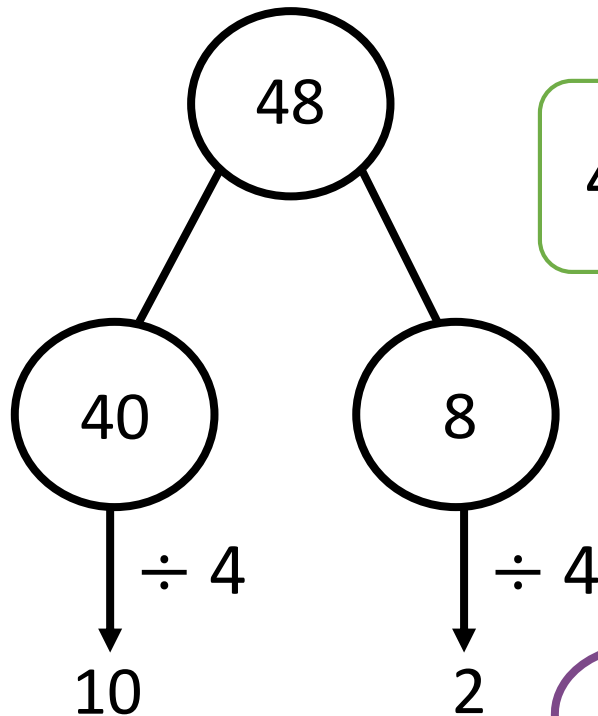
1) $40 \div 4 = 10$

2) $12 \div 4 = 3$

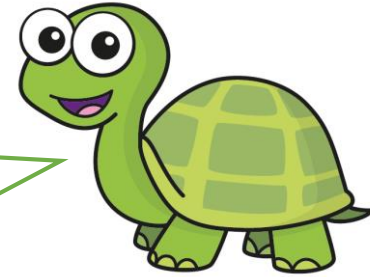
3) $52 \div 4 = 13$

4) $84 \div 7 = 12$

Tiny is using partitioning to help calculate $48 \div 4$



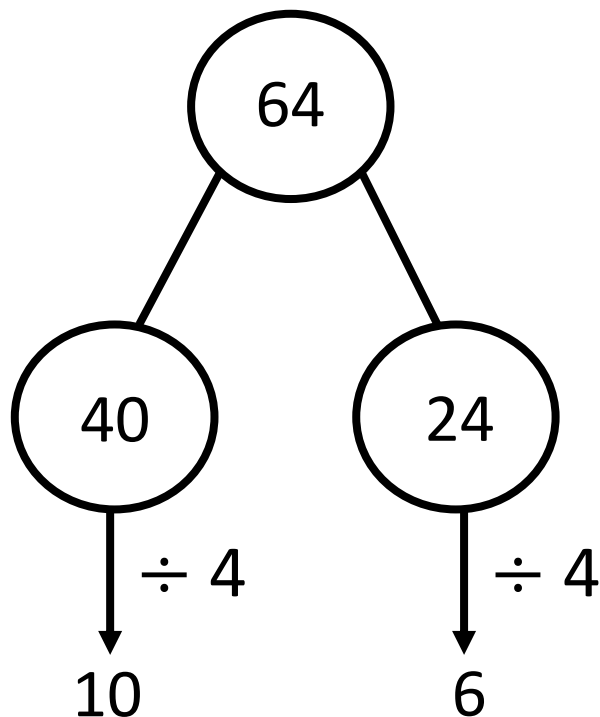
$$48 \div 4 = 12$$



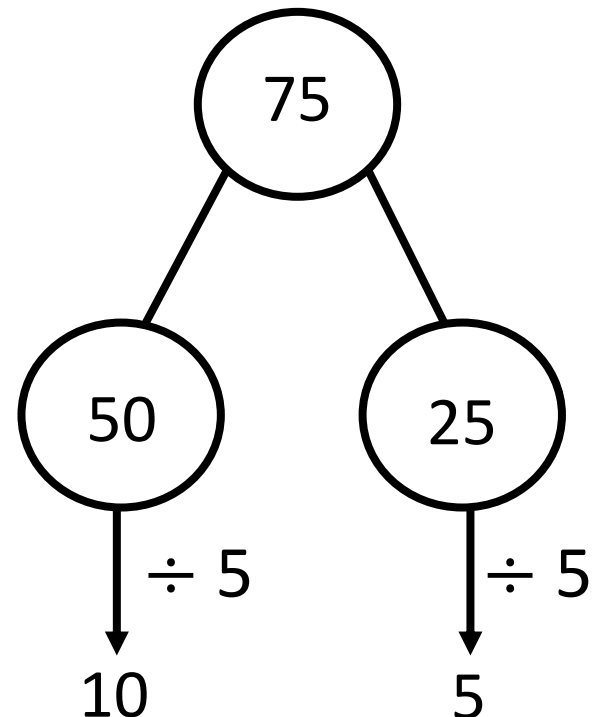
How does
partitioning help
you divide?

Use partitioning to complete the divisions

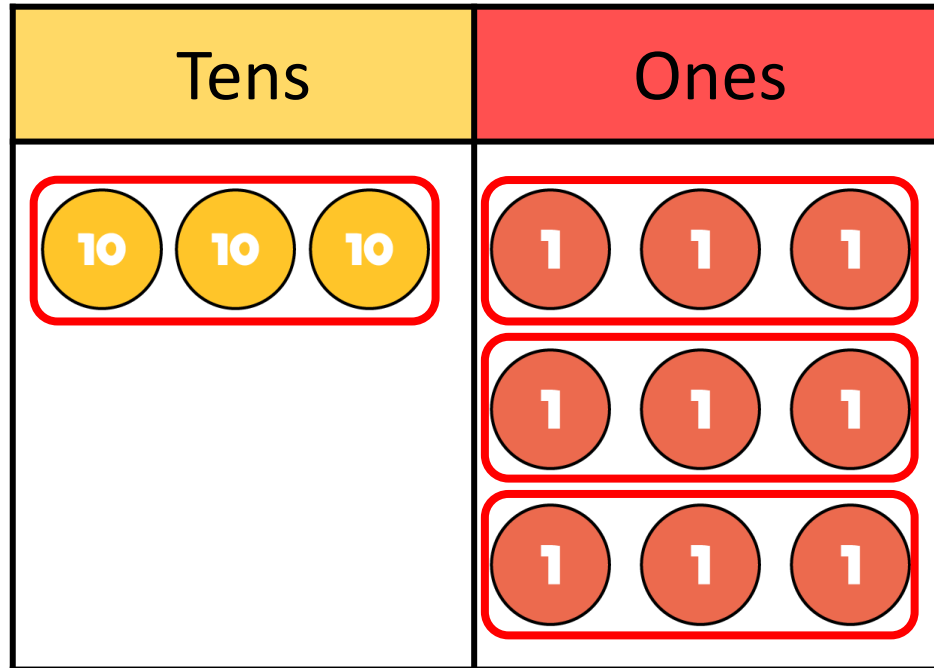
1) $64 \div 4 = 16$



2) $75 \div 5 = 15$



Complete the sentences.



		1	3	
	3	3	9	

There is 1 group of three tens.

There are 3 groups of three ones.

$$39 \div 3 = 13$$

Tens	Ones
10 10 10	1 1 1
	1 1 1
	1 1 1

		1	3	
	3	3	9	

What is the
same?

What is
different?

$$396 \div 3 =$$

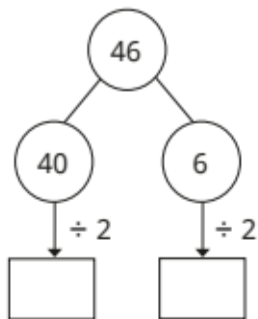
H	T	O
100 100 100	10 10 10 10 10 10 10 10 10	1 1 1 1 1 1

		1	3	2	
	3	3	9	6	

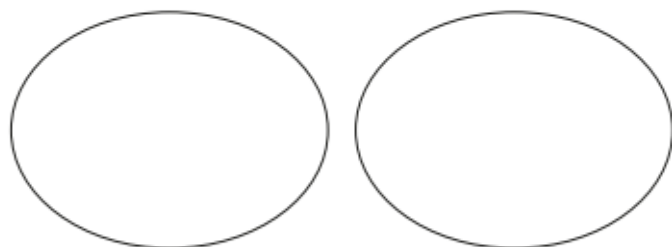
Guided....



- 1 a) Complete the part-whole model to work out $46 \div 2$



- b) Share the place value counters into two groups to work out $46 \div 2$



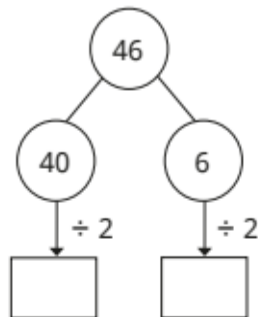
- c) Circle groups of 2 to work out $46 \div 2$

T	O

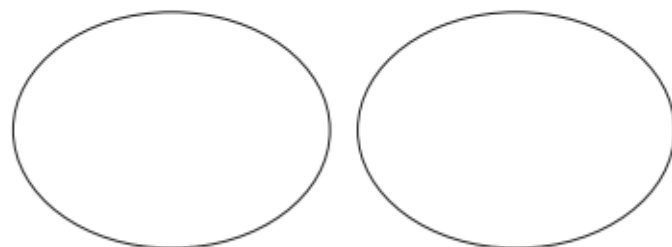
$$46 \div 2 = \boxed{}$$

Which method do you prefer?

- 1 a) Complete the part-whole model to work out $46 \div 2$



- b) Share the place value counters into two groups to work out $46 \div 2$



- c) Circle groups of 2 to work out $46 \div 2$

T	O

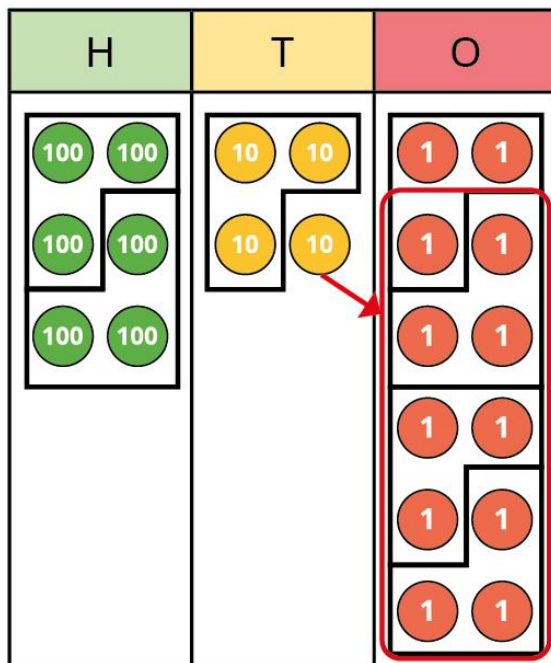
$$46 \div 2 = \boxed{}$$

Which method do you prefer?

S group- photo use objects

3 The place value chart shows $642 \div 3$

Complete the short division.

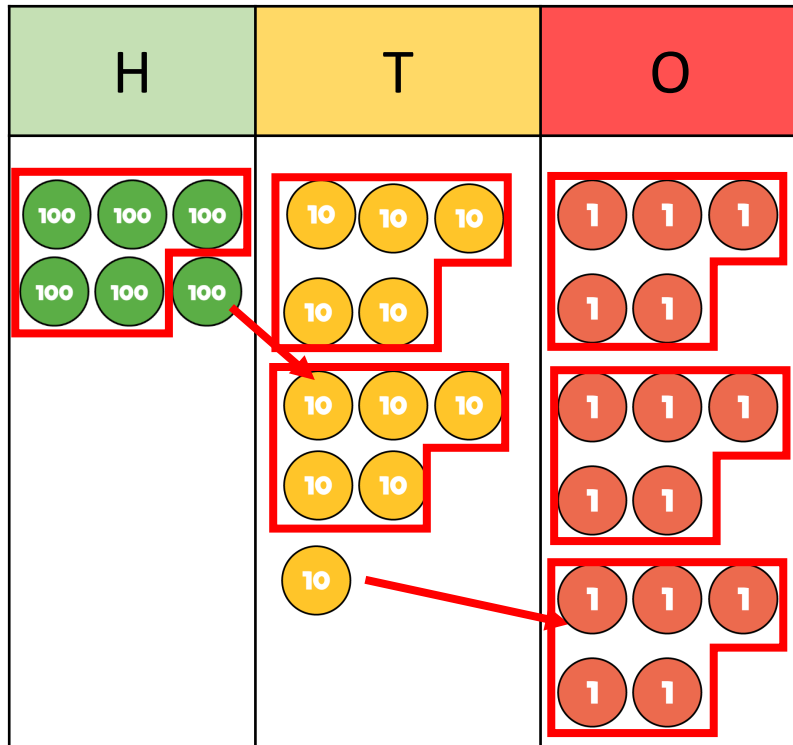


	3	6	4	2	



Guided...

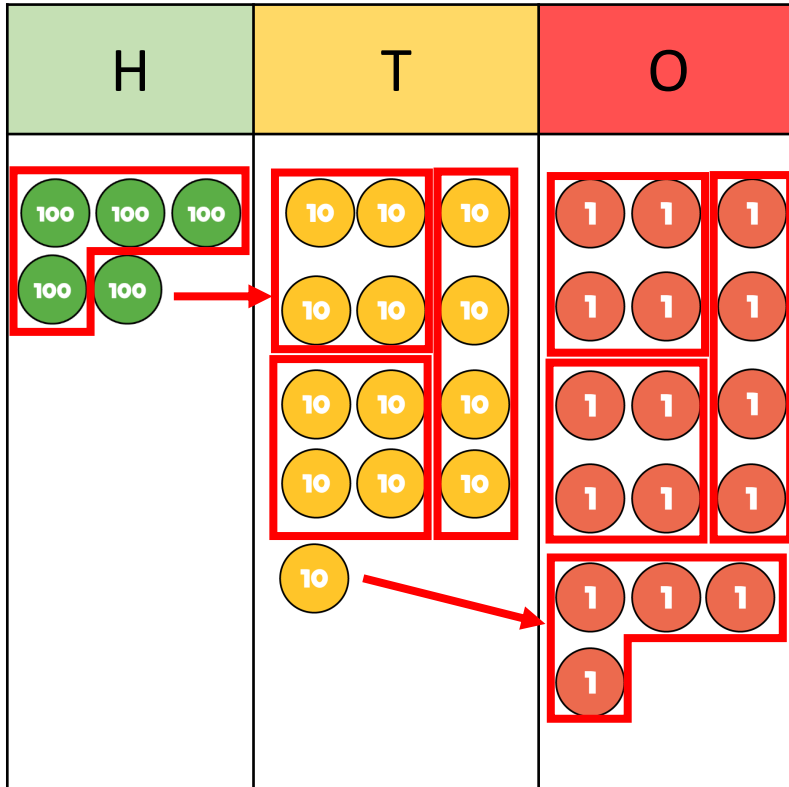
$$615 \div 5 =$$



		1	2	3	
	5	6	1	1	5

6 hundreds divided by 5 is equal to 1
hundred with a remainder of 1
I can exchange 1 hundred for 10 tens.

$$536 \div 4 =$$



		1	3	4	
	4	5	13	16	





4

Work out the divisions.

a)

	3	6	9	0	

c)

	3	6	4	5	

b)

	2	9	2	4	

d)

	5	5	6	5	



Tiny is working out $725 \div 5$

$$725 \div 5 = 11$$



		1		1		
	5	7	2	5		

What mistakes has Tiny made?

Tiny has not exchanged and has not used a place holder.

Have a think



Tiny is working out $725 \div 5$

$$725 \div 5 = 11$$



		1		1	
	5	7	2	5	

What mistakes has Tiny made?

Tiny is working out $725 \div 5$

$$725 \div 5 = 11$$



		1		1	
	5	7	2	5	

What mistakes has Tiny made?

Tiny is working out $725 \div 5$

$$725 \div 5 = 11$$



		1		1	
	5	7	2	5	

What mistakes has Tiny made?

Tiny is working out $725 \div 5$

$$725 \div 5 = 11$$

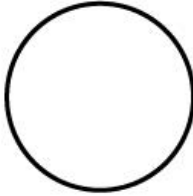


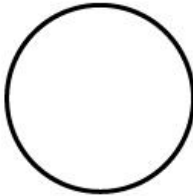
		1		1	
	5	7	2	5	

What mistakes has Tiny made?

5

Write $<$, $>$ or $=$ to compare the divisions.

a) $568 \div 4$  $675 \div 3$

b) $612 \div 3$  $816 \div 4$



What are the missing numbers?

		2	4			
		7	¹ 4	² 4		

$$2 \times \mathbf{3} = \mathbf{6}$$

$$24 \div 3 = 8$$

Have a think 

Maths Meeting- Tue

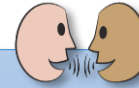
Time revision- time differences



Day 1: Calculate time intervals using the 24-hour clock.

A P.E. lesson **starts at 13:30** and **ends at 14:45**.

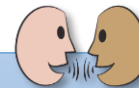
How long does it last?
Sketch a time number line to represent this on your whiteboard.



Compare your timeline with your partner's.

A singing lesson **starts at 11:50** and **ends at 12:35**.

How long does it last?
Sketch a time number line to represent this on your whiteboard.



Compare your timeline with your partner's.



The 24-Hour Clock

This clock and table show each hour in the day written in 12-hour time and 24-hour time.

12:00 a.m. = 00:00	12:00 p.m. = 12:00
1:00 a.m. = 01:00	1:00 p.m. = 13:00
2:00 a.m. = 02:00	2:00 p.m. = 14:00
3:00 a.m. = 03:00	3:00 p.m. = 15:00
4:00 a.m. = 04:00	4:00 p.m. = 16:00
5:00 a.m. = 05:00	5:00 p.m. = 17:00
6:00 a.m. = 06:00	6:00 p.m. = 18:00
7:00 a.m. = 07:00	7:00 p.m. = 19:00
8:00 a.m. = 08:00	8:00 p.m. = 20:00
9:00 a.m. = 09:00	9:00 p.m. = 21:00
10:00 a.m. = 10:00	10:00 p.m. = 22:00
11:00 a.m. = 11:00	11:00 p.m. = 23:00

Midnight can be referred to as both 00:00 and 24:00 to show the start and the end of a day, although it is more usually written as 00:00.

From midday to midnight, add **12** to the hours to convert 12-hour time to 24-hour time.

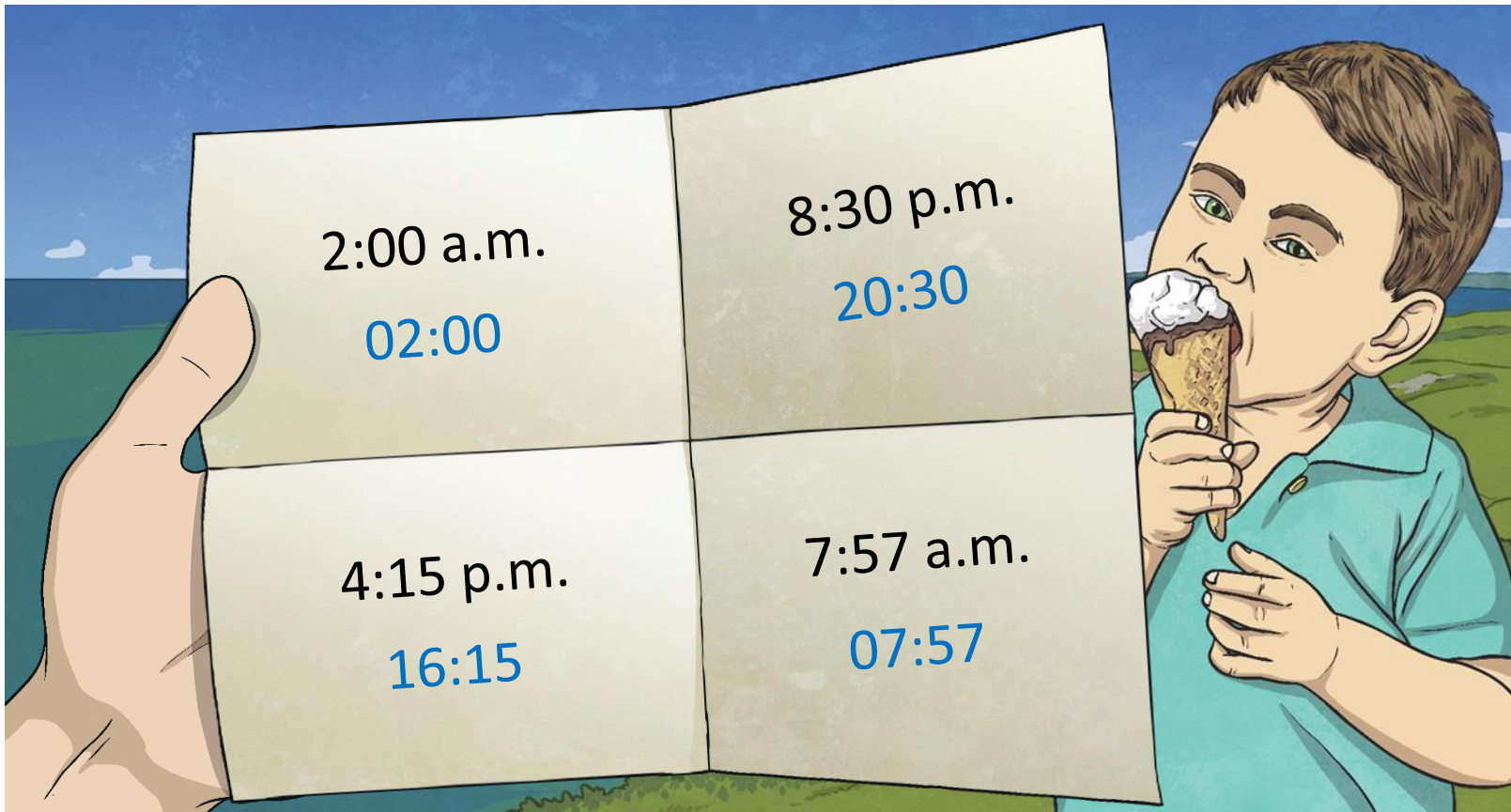
From midday to midnight, subtract **12** from the hours to convert 24-hour time to 12-hour time.



The 24-Hour Clock



Convert these 12-hour times to 24-hour times.



The 24-Hour Clock



Convert these 24-hour times to 12-hour times.

14:22
2:22 p.m.

06:36
6:36 a.m.

20:01
8:01 p.m.

11:37
11:37 a.m.



Holiday Fun



There are lots of fantastic activities for Rhys to do at the summer holiday activity camp.

Mini tennis 09:30

Swimming 14:30

Crazy golf 11:25

Football 15:10

Skateboarding 10:15

Mountain biking 12:45

Choose four of the activities for Rhys to do today.

What would be the best way to write down the activities, in time order, so that Rhys knows when to do them?

Holiday Fun



Rhys wrote down the activities he chose in a timetable.
Timetables show us which activities are happening at which time.

Can you think of
other situations in which
timetables are used?

Holiday Camp	
Activity	Start Time
Mini tennis	09:30
Painting	10:45
Mountain biking	12:45
Lunch	13:30
Swimming	14:30

This timetable
uses a 24-hour
clock.

Reading Timetables



Here is a timetable of the activities for this holiday camp. Rhys is in the Red Group. The two groups are doing activities at different times.



Twinkl Holiday Camp		
Activity	Red Group	Blue Group
Mini tennis	09:30	09:20
Painting	10:45	10:10
Mountain biking	12:45	10:55
Lunch	13:25	12:55
Football	14:15	13:40
Free Time	15:10	15:00

?

What activity will **Red Group** be doing at 12:45?

Reading Timetables

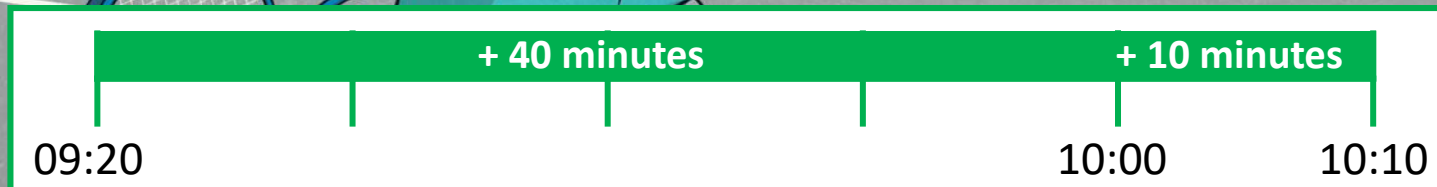


For how many minutes will **Blue Group** be playing mini tennis?

Twinkl Holiday Camp		
Activity	Red Group	Blue Group
Mini tennis	09:30	09:20
Painting	10:45	10:10
Mountain biking	12:45	10:55
Lunch	13:25	12:55
Football	14:15	13:40
Home Time	15:10	15:00



$$40 + 10 = 50$$



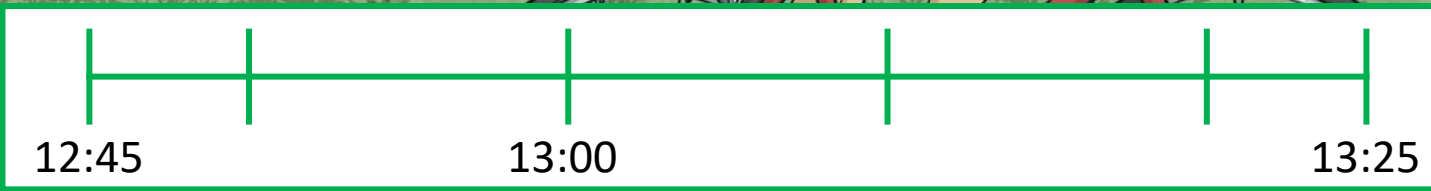
Reading Timetables



For how many minutes will **Red Group** be mountain biking?
Use the number line to help you work it out.

Twinkl Holiday Camp		
Activity	Red Group	Blue Group
Mini tennis	09:30	09:20
Painting	10:45	10:10
Mountain biking	12:45	10:55
Lunch	13:25	12:55
Football	14:15	13:40
Home Time	15:10	15:00

=
40 minutes



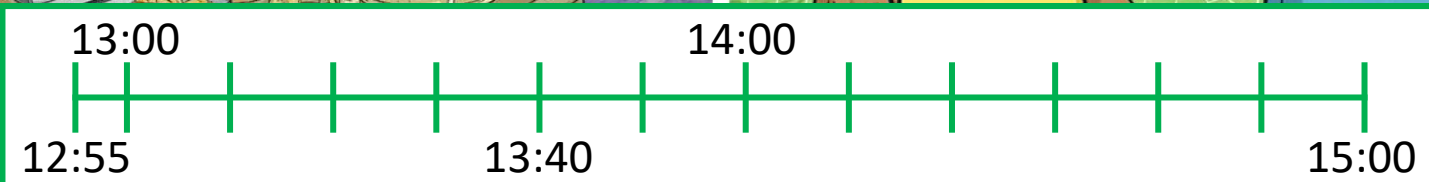
Reading Timetables



For how many minutes in total will it take **Blue Group** to have lunch and play football? Use the number line to help you to work it out.

Twinkl Holiday Camp		
Activity	Red Group	Blue Group
Mini tennis	09:30	09:20
Painting	10:45	10:10
Mountain biking	12:45	10:55
Lunch	13:25	12:55
Football	14:15	13:40
Home Time	15:10	15:00

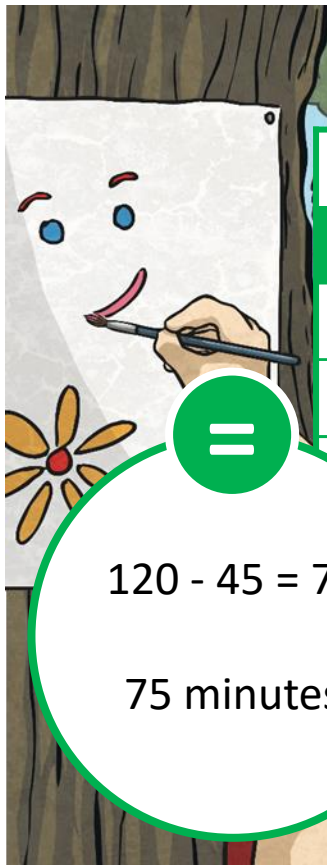
=
125 minutes



Reading Timetables



For how many minutes longer will
Red Group be painting than **Blue Group**?



Twinkl Holiday Camp		
Activity	Red Group	Blue Group
Mini tennis	09:30	09:20
Painting	10:45	10:10
Mountain biking	12:45	10:55
Lunch	13:25	12:55
Football	14:15	13:40
Home Time	15:10	15:00

120 minutes

$120 - 45 = 75$

75 minutes

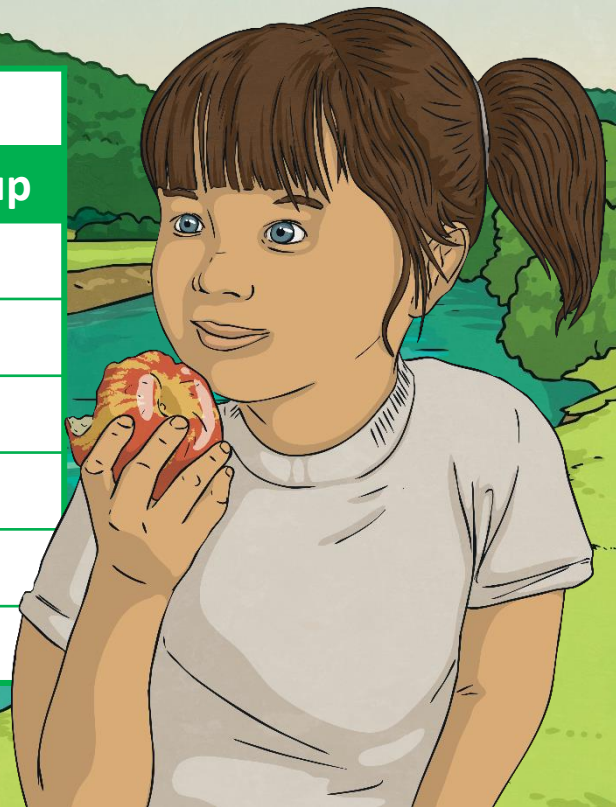
45 minutes

Reading Timetables



Red Group will have lunch for 50 minutes.
Use this information to fill in the gap in the table.

Twinkl Holiday Camp		
Activity	Red Group	Blue Group
Mini tennis	09:30	09:20
Painting	10:45	10:10
Mountain biking	12:45	10:55
Lunch	13:25	12:55
Football	14:15	13:40
Home Time	15:10	15:00



Maths Meeting- Weds

x 6 x 3



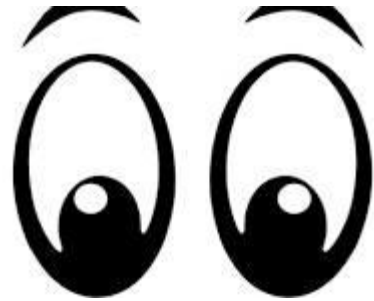
How quickly can you say your
x3 tables?



If you know your x 3 what else do you
know?!

Let's watch....

https://www.youtube.com/watch?v=X6veFfX_cFw



Let's practice....

<https://www.timestables.co.uk/6-times-table.html>

Challenge time- partner game!

Pick a square to solve- if you get it right put your coloured counter/cube on it!
4 in a row wins!

$18 \div 6 =$	$12 \times 6 =$	$5 \times 6 =$	$2 \times 6 =$	$66 \div 6 =$
$1 \times 6 =$	$0 \times 6 =$	$6 \div 6 =$	$60 \div 6 =$	$4 \times 6 =$
$42 \div 6 =$	$12 \div 6 =$	$11 \times 6 =$	$24 \div 6 =$	$60 \div 6 =$
$12 \div 6 =$	$5 \times 6 =$	$6 \div 6 =$	$0 \times 6 =$	$6 \times 6 =$
$7 \times 6 =$	$36 \div 6 =$	$6 \times 6 =$	$54 \div 6 =$	$48 \div 6 =$
$72 \div 6 =$	$8 \times 6 =$	$72 \div 6 =$	$42 \div 6 =$	$12 \times 6 =$
$4 \times 6 =$	$9 \times 6 =$	$11 \times 6 =$	$3 \times 6 =$	$10 \times 6 =$
$8 \times 6 =$	$18 \div 6 =$	$40 \div 6 =$	$30 \div 6 =$	$66 \div 6 =$

Maths Meeting- Thurs

x10, x 100, x1000





1000

×

100

×

10

×

×

10

100

10

Multiply by 10,
100 and 1000



What number is shown on the place value chart?

HTh	TTh	Th	H	T	O
			● ● ● ●	● ● ● ● ● ●	● ● ● ● ● ● ● ●

468

Complete the sentences:

If I multiply this number by 10, it becomes 4680

The digits move one place to the left

I need to put a zero in the empty column to act as a place holder

If I multiply this number by 100, it becomes 46 800

The digits move two places to the left

If I multiply this number by 1000, it becomes 468 000

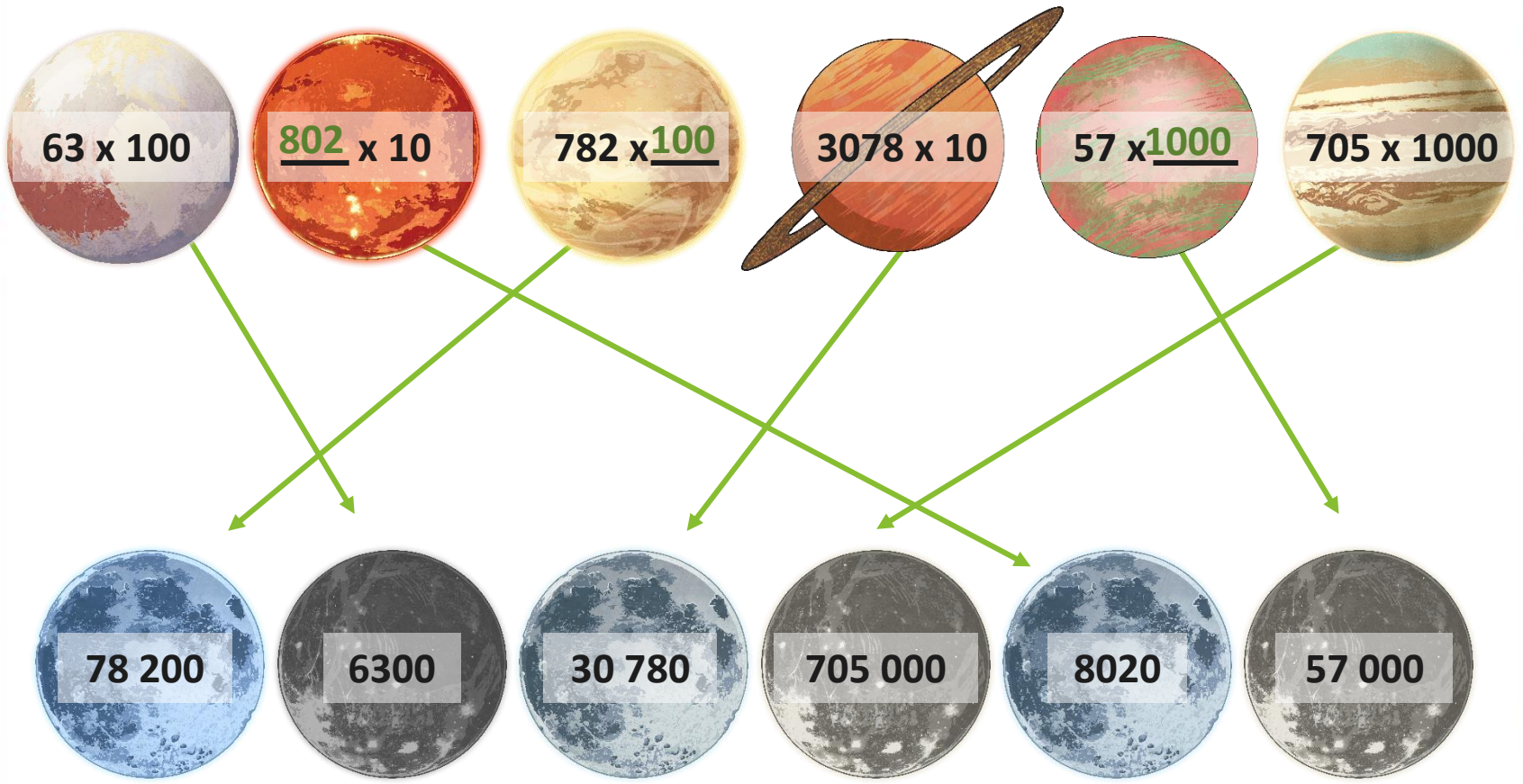
The digits move three places to the left



Multiply by 10, 100 and 1000

Diving

Match each planet to its moon to complete the calculation.



Multiply by 10, 100 and 1000

Deeper



10

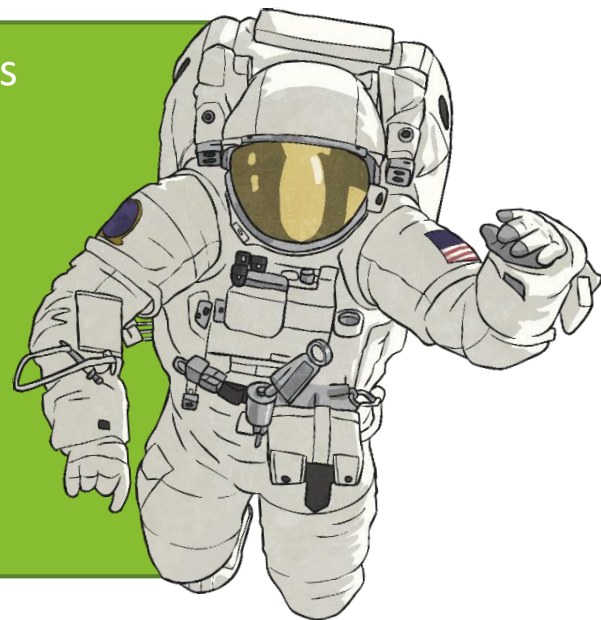
Jim says, "To multiply by 100, I just add two zeros."

Kiera says, "I times by 10 and then times by 10 again."

Do you agree with Jim and Kiera's methods for multiplying by 100? Explain your thinking.

Jim should have said that the digits move two places to the left. If you are multiplying a decimal number by 100, for example 3.5×100 , adding two zeros results in 3.500 and not 350. If any columns on the right of the digits have become empty, they will need a place holder.

Kiera's method is correct as $10 \times 10 = 100$. It is the same as multiplying by 100.



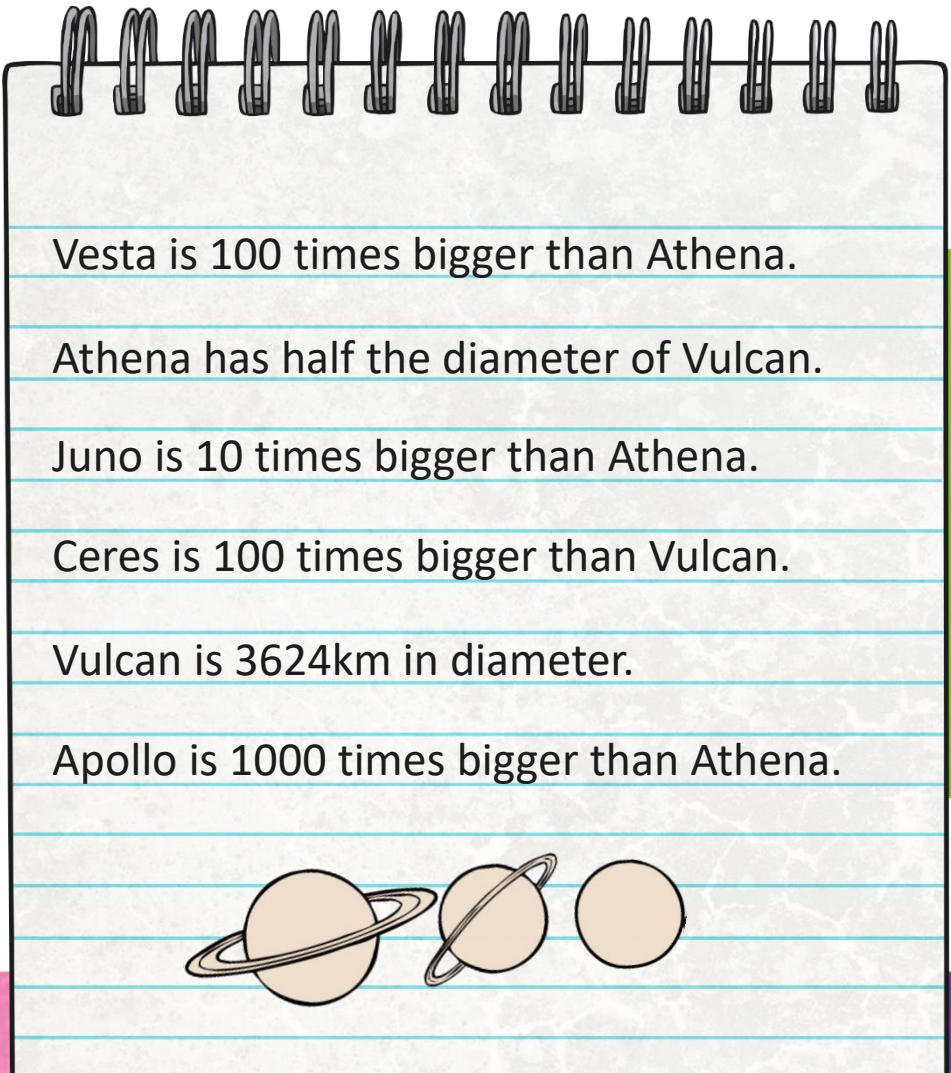
100



Multiply by 10, 100 and 1000

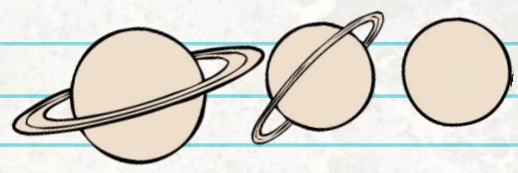
Deeper

Using the clues below, can you work out the diameter of these new planets?



- Vesta is 100 times bigger than Athena.
- Athena has half the diameter of Vulcan.
- Juno is 10 times bigger than Athena.
- Ceres is 100 times bigger than Vulcan.
- Vulcan is 3624km in diameter.
- Apollo is 1000 times bigger than Athena.

- Vulcan – 3624km
- Athena – 1812km
- Juno – 18 120km
- Ceres – 362 400km
- Vesta – 181 200km
- Apollo – 1 812 000km





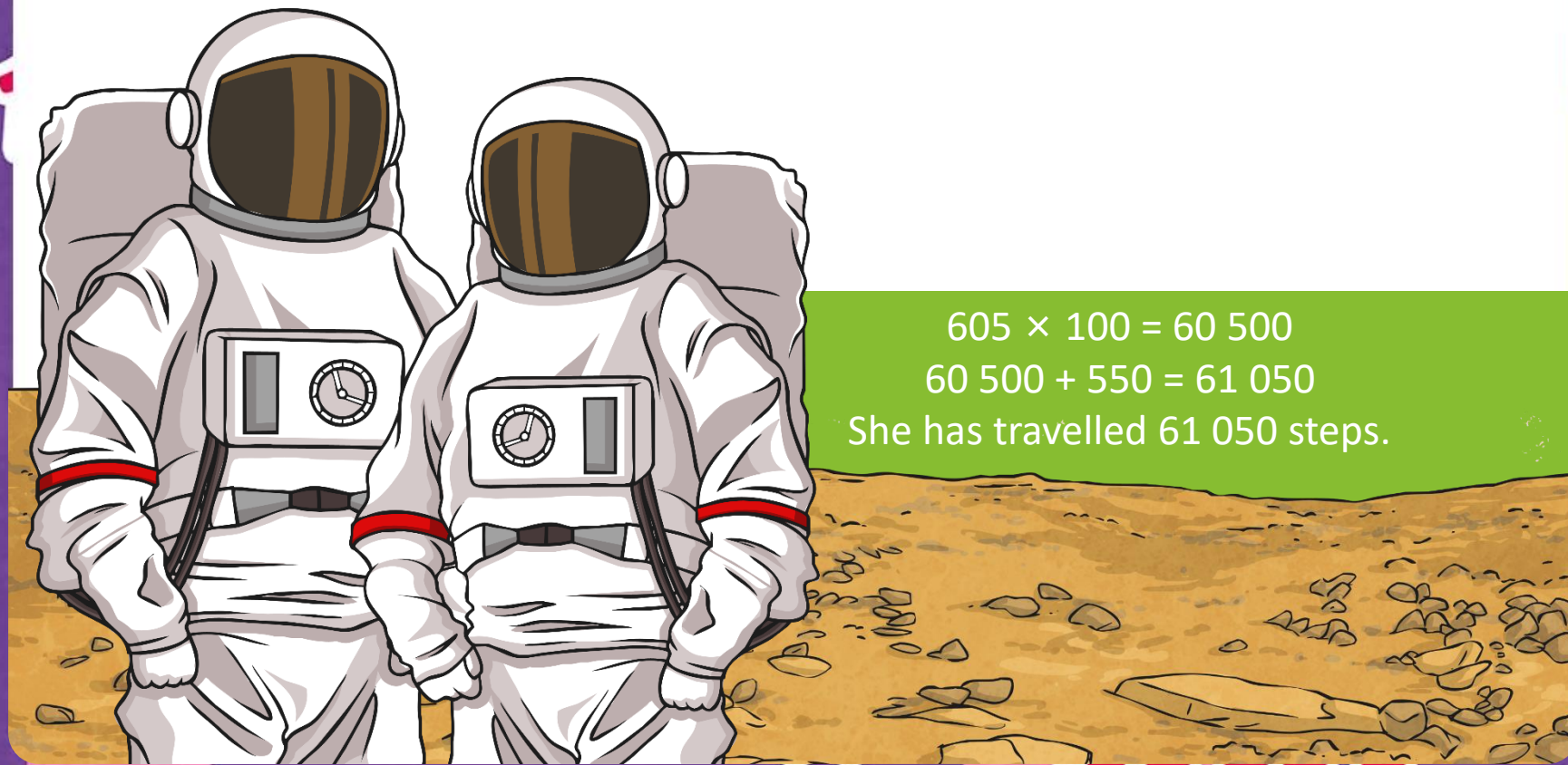
Multiply by 10, 100 and 1000

Deeper

Alan and Astrid, the astronauts, are exploring the new planet, Vulcan.

Alan has travelled 605 steps. Astrid has travelled 100 times more steps and then walked another 550 steps. How many steps has she travelled?

$605 \times 100 = 60\,500$
 $60\,500 + 550 = 61\,050$
She has travelled 61 050 steps.





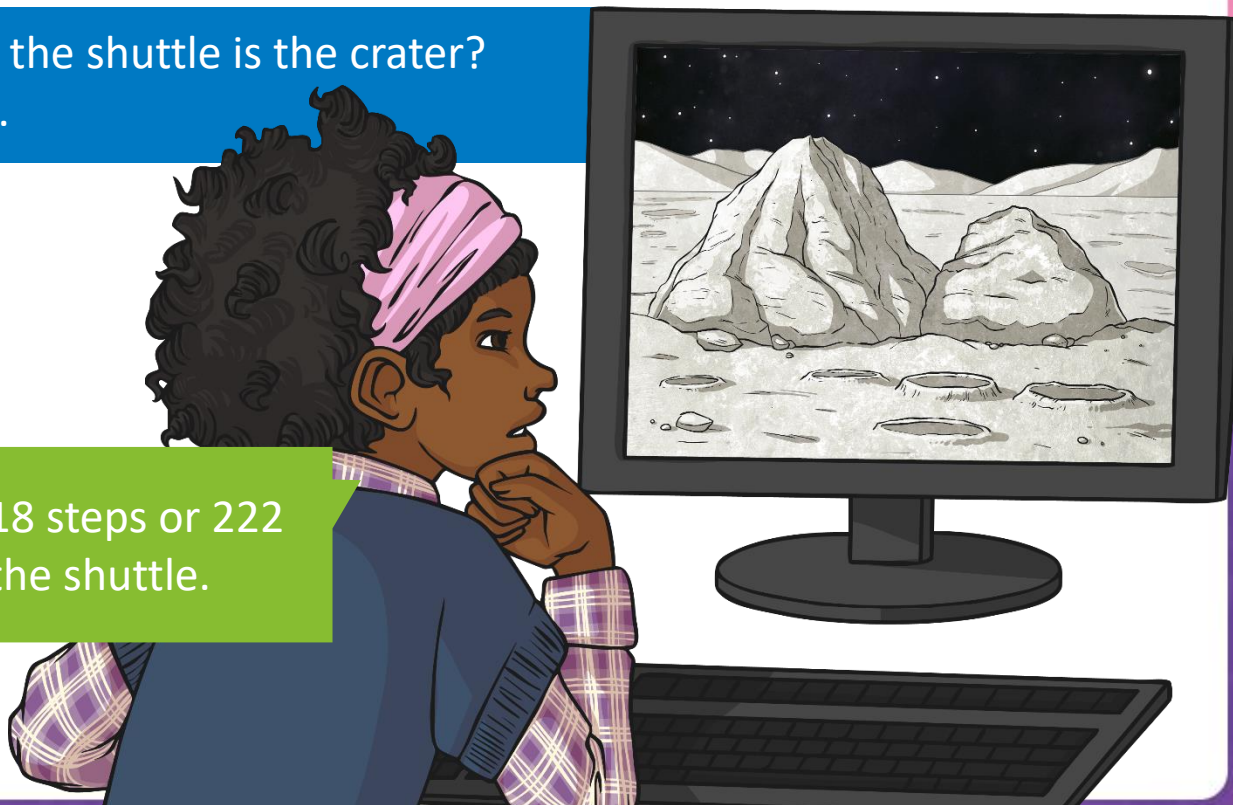
Multiply by 10, 100 and 1000

Deepest

Astrid has discovered a crater a certain number of steps away from the shuttle. The number has 3 digits. She says that when this number is multiplied by 1000, the hundred thousands and ten thousands digits are the same. Also, the product of the number's digits is 8.

How many steps from the shuttle is the crater?
Find both possibilities.

The crater is either 118 steps or 222 steps away from the shuttle.



Fri 3rd Feb

LO: To divide a 4 digit no by 1 digit

Whiteboards- get
ready to share

$$1) 48 \div 4 =$$

$$2) 480 \div 4 =$$

$$3) 72 \div 9 =$$

$$4) \boxed{} \div 9 = 800$$

IS

$$1) 48 \div 4 = 12$$

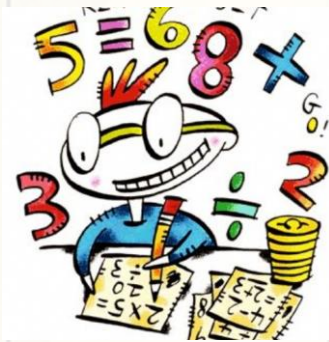
$$2) 480 \div 4 = 120$$

$$3) 72 \div 9 = 8$$

$$4) 7,200 \div 9 = 800$$

$$72 \times 100$$

Maths Three Repeating Golden Threads



Mastery

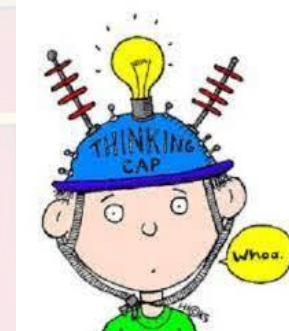
Pupils acquire a deep, long-term, secure adaptable understanding

Fluency

Quick and. efficient recall of facts and procedures

Application

The use of maths everyday in the real world, outside the classroom.



Term Spring 1 Week beginning 23.1.23

Block Multiplication and division (B)

Key vocabulary

Multiplication, division, digit, method, place holder, place value, remainder, partition, links to addition/subtraction, estimate, exchange

	WT	EX	S
Multiply up to a 4-digit number by a 1-digit number			
Multiply a 2-digit number by a 2-digit number			
Multiply a 3-digit number by a 2-digit number			
Multiply a 4-digit number by a 2-digit number			
Solve problems with multiplication			
Short division			
Divide a 4-digit number by a 1-digit number			
Divide with remainders			
Efficient division			
Solve problems with multiplication and division			

Stem sentences

- First, I multiply ___ by ___ ones. Then I multiply ___ by ___ tens. Finally, I add together ___ and ___.
- To calculate $\text{___} \times 24$, I can do $\text{___} \times \text{___} \times \text{___}$
- To calculate $9,999 \times \text{___}$, I can do $10,000 \times \text{___} - \text{___}$
- The most efficient strategy to calculate $\text{___} \times \text{___}$ is ...
- ___ hundreds divided by ___ is equal to ___ hundreds with a remainder of ___
- Exchange the remainder, then ___ tens divided by ___ is equal to ___ tens with a remainder of ___
- Exchange the remainder, then ___ ones divided by ___ is equal to ___ ones

Crucial Vocab...

short division
partition
remainder
exchange

short division
partition
remainder
exchange

short division
partition
remainder
exchange

short division
partition
remainder
exchange

short division
partition
remainder
exchange

short division
partition
remainder
exchange

short division
partition
remainder
exchange

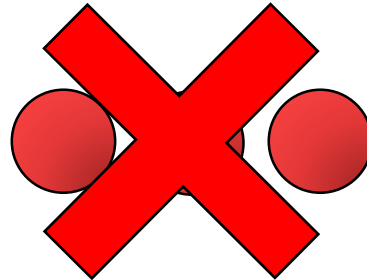
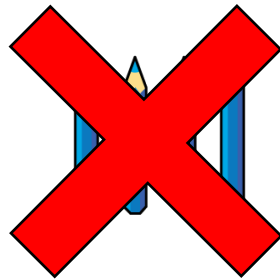
short division
partition
remainder
exchange

short division
partition
remainder
exchange

Fri

There are 4,884 crayons and they come
in packs of 4

How many packs are there?



There are 4,884 crayons and they come
in packs of 4

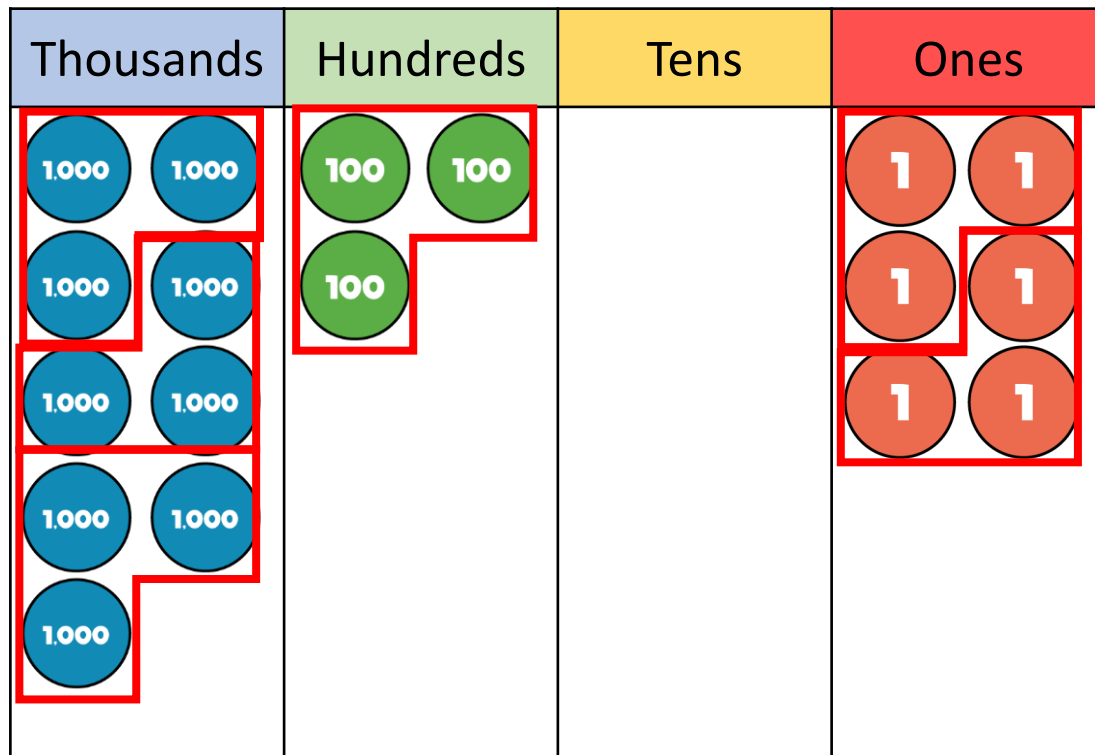
How many packs are there? **1,221 packs**

Thousands	Hundreds	Tens	Ones
1000 1000 1000 1000	100 100 100 100 100 100 100 100	10 10 10 10 10 10 10 10	1 1 1 1

		1	2	2	1	
	4	4	8	8	4	

$$9,306 \div 3 = 3,102$$

Have a think



		3	1	0	2	
	3	9	3	0	6	

There are 3 groups of 3 thousands.

There is 1 group of 3 hundreds.

There are 0 groups of 3 tens.

There are 2 groups of 3 ones.

Stick in books- ch draw counters on and then group. Complete sentence stems



$$9,306 \div 3 =$$

Thousands	Hundreds	Tens	Ones

	3	9	3	0	6		

There are ____ groups of 3 thousands.
 There is ____ group of 3 hundreds.
 There are ____ groups of 3 tens.
 There are ____ groups of 3 ones.

$$9,306 \div 3 =$$

Thousands	Hundreds	Tens	Ones

	3	9	3	0	6		

There are ____ groups of 3 thousands.
 There is ____ group of 3 hundreds.
 There are ____ groups of 3 tens.
 There are ____ groups of 3 ones.

$$9,306 \div 3 =$$

Thousands	Hundreds	Tens	Ones

	3	9	3	0	6		

There are ____ groups of 3 thousands.
 There is ____ group of 3 hundreds.
 There are ____ groups of 3 tens.
 There are ____ groups of 3 ones.

Fri

$$9,306 \div 3 =$$

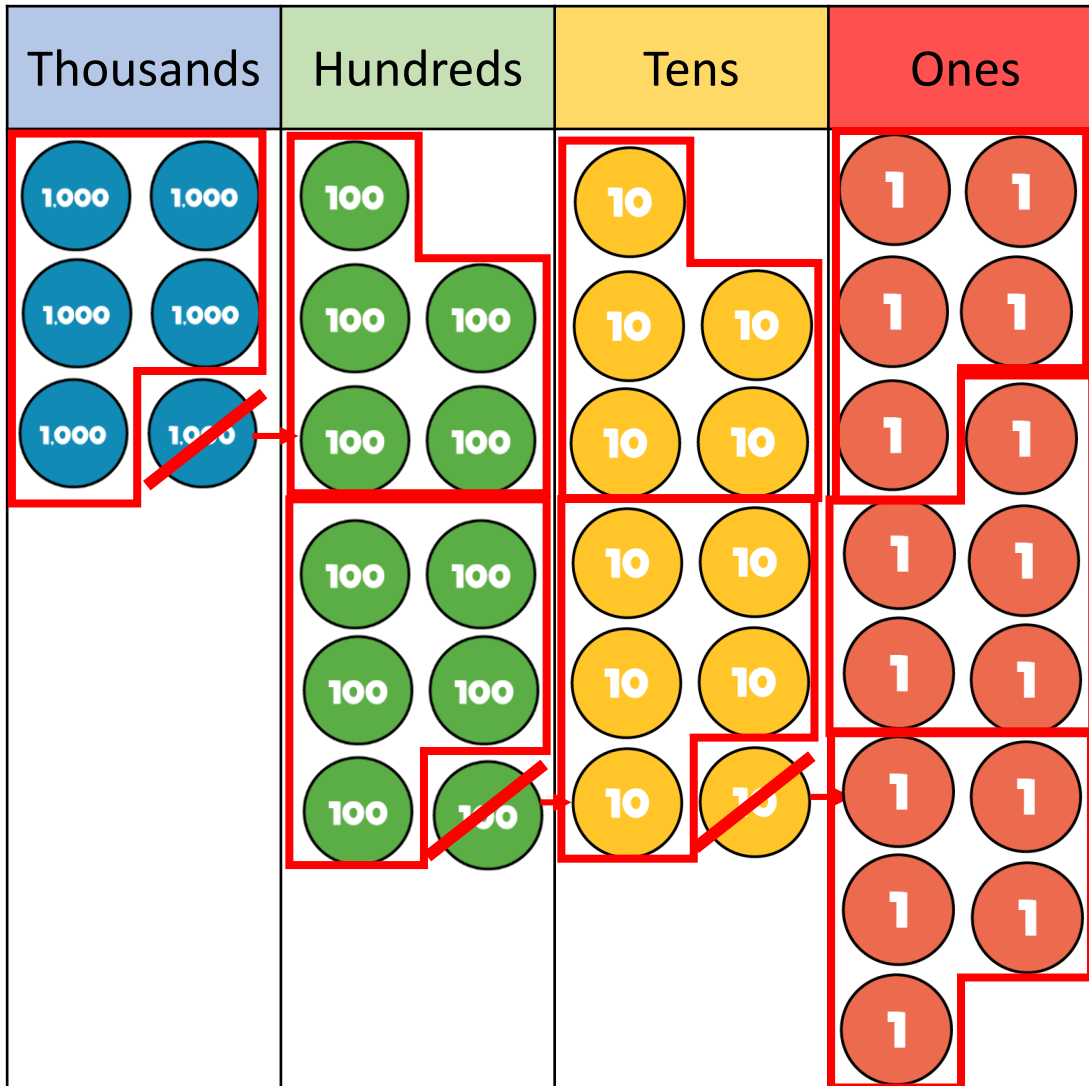
Thousands	Hundreds	Tens	Ones

	3	9	3	0	6		

There are ____ groups of 3 thousands.
 There is ____ group of 3 hundreds.
 There are ____ groups of 3 tens.
 There are ____ groups of 3 ones.

$$6,115 \div 5 = 1,223$$

Have a think



		1	2	2	3
	5	6	1	1	1
					5

Complete the divisions.

Have a think



		1	2	0	3	
	8	9 ¹ 6 2 ² 4				

		2	1	3	1	
	3	6 3 9 3				

What is the
same?

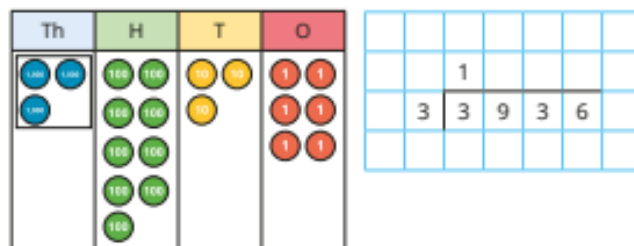
What is
different?

Divide a 4-digit number by a 1-digit number



- 1 a) Circle the groups of 3 to help you complete the sentences and the division.

The first step has been done for you.



There is 1 group of 3 thousands.

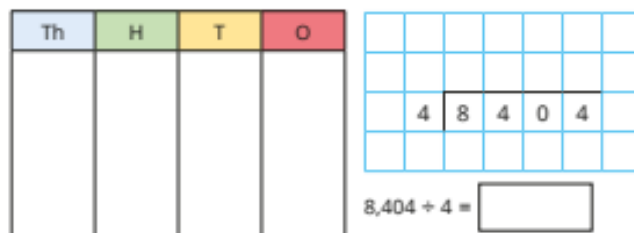
There are groups of 3 hundreds.

There is group of 3 tens.

There are groups of 3 ones.

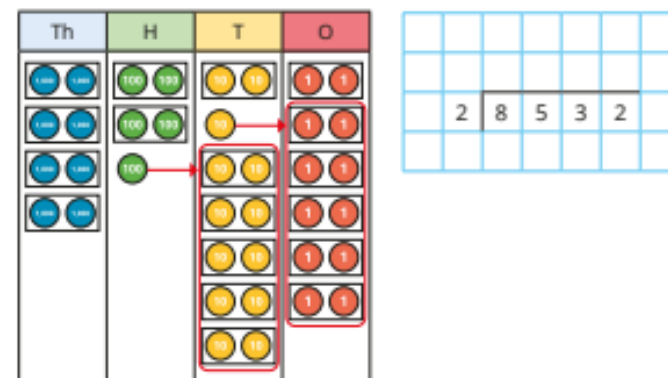
$$3,936 \div 3 = \boxed{}$$

- b) Use the place value chart to work out $8,404 \div 4$

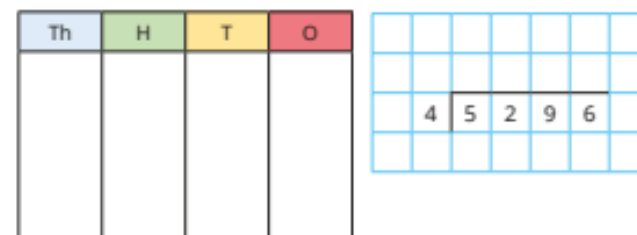


- 2 Use the place value charts to work out the divisions.

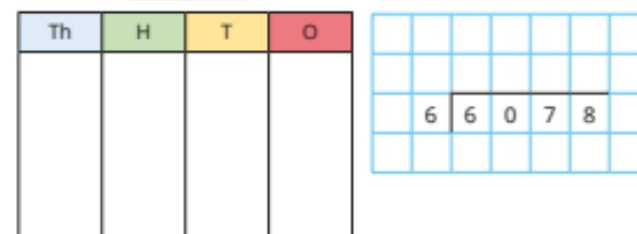
a) $8,532 \div 2 = \boxed{}$



b) $5,296 \div 4 = \boxed{}$



c) $6,078 \div 6 = \boxed{}$



Copy into books

3 Complete the divisions.

a)

	5	3	5	6	0	

c)

	4	6	5	2	4	

b)

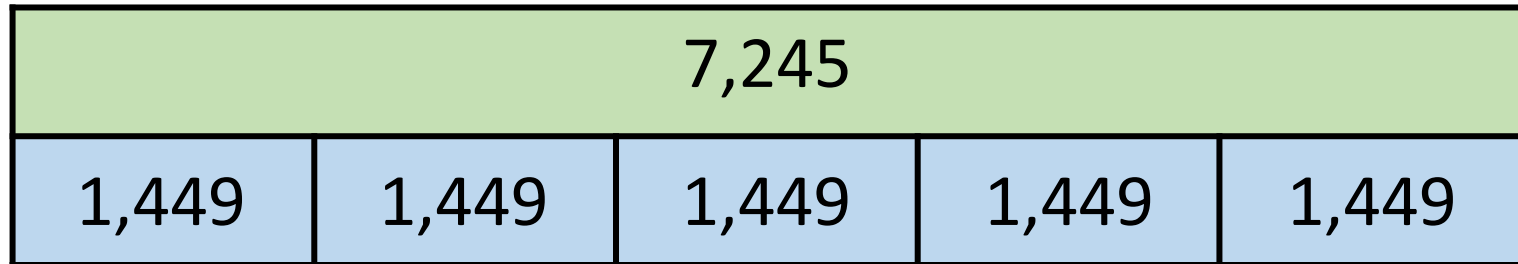
	9	2	7	3	6	

d)

	6	9	7	8	6	



What calculation does this bar model represent?



$$7,245 \div 5$$

Have a think



Work out the value of a .

		1	4	4	9	
	5	7	2	2	4	5



4

Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

$$a = \boxed{}$$

b	b	b	b	b	b	b	b
5,328							

$$b = \boxed{}$$

120		120		120		120	
c	c	c	c	c	c	c	c

$$c = \boxed{}$$



4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

Fri

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120		120		120		120	
c	c	c	c	c	c	c	c

4 Work out the values of a , b and c .

9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120	120	120	120		
c	c	c	c	c	c

4 Work out the values of a , b and c .

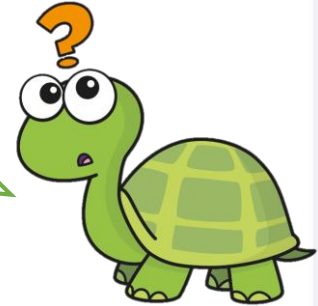
9,415						
a	a	a	a	a	a	a

b	b	b	b	b	b	b	b
5,328							

120		120		120		120	
c	c	c	c	c	c	c	c

Tiny is working out $2,240 \div 7$

This cannot be done because
7 is larger than all of the
digits in the number.



Do you agree with Tiny?
Explain why.

Have a think 🤔

Tiny could make exchanges to be able to complete
the calculation.

$$2,240 \div 7 = 320$$

Discuss



Tiny is working out $2,240 \div 7$

Fri

This cannot be done because
7 is larger than all of the
digits in the number.



Do you agree with Tiny?
Explain why.

Have a think



Tiny is working out $2,240 \div 7$

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Explain why.

Have a think



Tiny is working out $2,240 \div 7$

This cannot be done because
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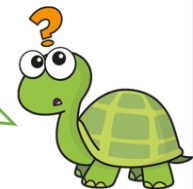
Do you agree with Tiny?
Explain why.

Have a think



Tiny is working out $2,240 \div 7$

This cannot be done because
7 is larger than all of the
digits in the number.



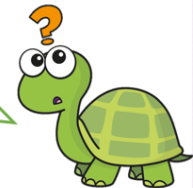
Do you agree with Tiny?
Explain why.

Have a think



Tiny is working out $2,240 \div 7$

This cannot be done because
7 is larger than all of the
digits in the number.



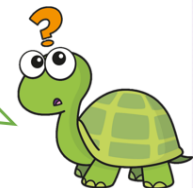
Do you agree with Tiny?
Explain why.

Have a think



Tiny is working out $2,240 \div 7$

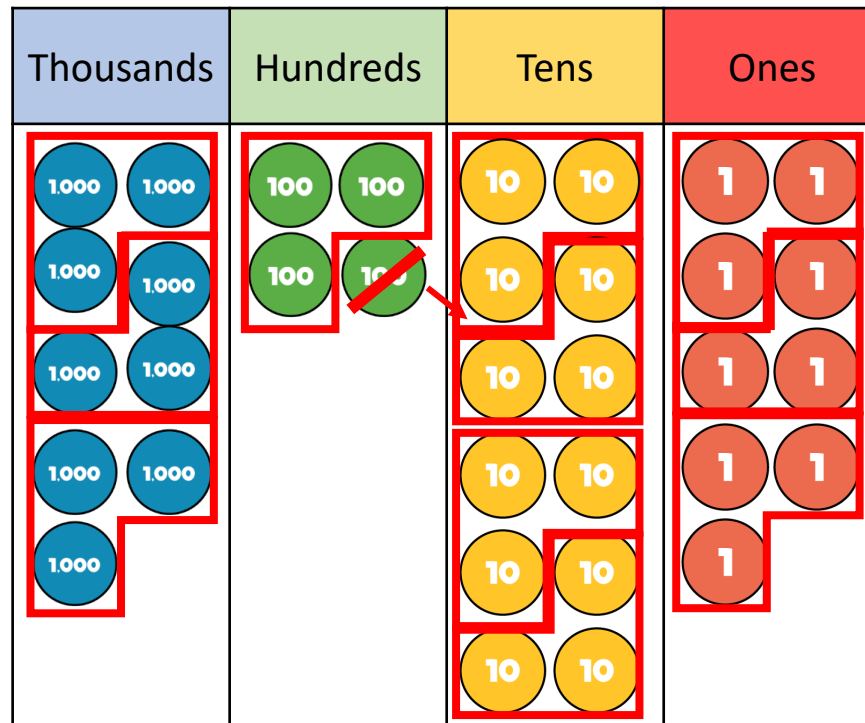
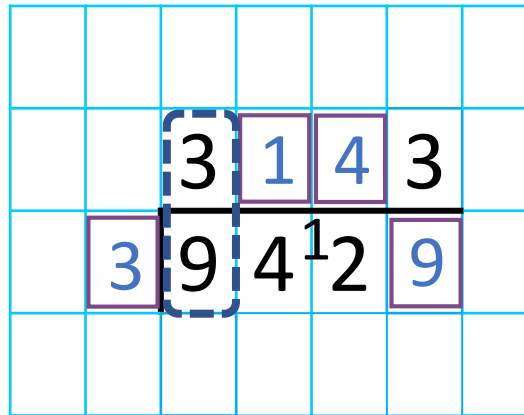
This cannot be done because
7 is larger than all of the
digits in the number.



Do you agree with Tiny?
Explain why.

Have a think







5

Fill in the missing digits.

a)

		2	2		1	
		8	9	6		

b)

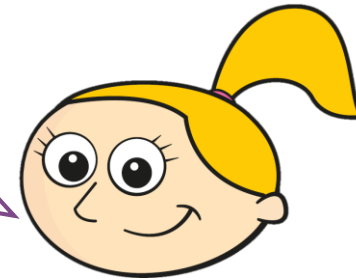
		3		6		
		6	5		4	

Discuss..extension if time

5,427 marbles are put into bags with 9 marbles in each bag.

The bags are shared equally between three boxes.
How many bags of marbles are in each box?

First, I'm going to divide 5,427 by 9. Then, I'm going to divide that number by 3



Eva

Where do you need to start?

Have a think



5,427 marbles are put into bags with 9 marbles in each bag.

The bags are shared equally between three boxes.
How many bags of marbles are in each box?

		0	6	0	3	
	9	5	4	2	7	

		2	0	1		
	3	6	0	3		

There are 201 marbles in each box.