

2 4.1.2 2

LO: To multiply with an exchange.

I know when to exchange.

I can use concrete resources to show my multiplications.

I understand where to record an exchange in short multiplication.

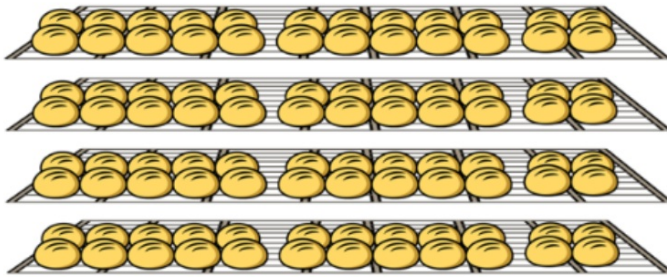
Flashback 4

Year 3 | Week 3 | Day 4



- 1) Calculate $38 \div 3$
- 2) What is 13×3 ?
- 3) What is 90×3 ?
- 4) Subtract 45 from 450

Each shelf has 24 rolls.
How many rolls are there in total?



$$\begin{array}{r} 24 \\ / \quad \backslash \\ 20 \quad 4 \end{array}$$

4 × 24

Т	О

Т	О



Calculate 5×32



H	T	O

H	T	O

10

1



I placed the 3 digit cards into the calculation below.
My total was a multiple of 10



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

Have a think



How could Mo have arranged the cards?

Is there more than one way to make a multiple of 10?

- 1 There are 23 marbles in a jar.
There are 5 jars.



Tens	Ones

How many marbles are there in total?

- 2 Work out 4×15

Tens	Ones

- 3 Complete the multiplications.

a) 4×24 b) 3×17 c) 3×25 d) 34×4

- 1 There are 12 marbles in a jar.
There are 5 jars.



Tens	Ones

How many marbles are there in total?

- 2 Work out 5×15

Tens	Ones

- 3 Complete the multiplications.

a) 5×24 b) 2×17 c) 2×25 d) 34×5

4 Complete the column multiplications.

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

T	O
2	4
x	3

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

T	O
3	5
x	4

5 Work out the multiplications.

a) 25×5

T	O
2	5
x	5

b) 35×6

T	O
3	5
x	6

c) 5×26

d) 4×36

4 Complete the column multiplications.

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

T	O
2	4
x	5

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

T	O
2	5
x	4

5 Work out the multiplications.

a) 25×5

T	O
2	5
x	5

b) 35×2

T	O
3	5
x	2

c) 5×26

d) 2×52

6 Tommy works out 37×2

		T	O	
		3	7	
	x		2	
		6	1	4

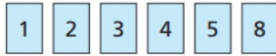
What mistake has Tommy made? Work out the correct answer.

7 Find the missing numbers.

		2	2
	x		
		8	8

				1
	x			
		1	2	4

8 Here are some digit cards.



a) Use the digit cards to create a multiplication and work out the answer.

$$\square \square \times \square = \square$$

b) Work with a partner to find calculations that have:

- an odd product
- an even product
- an exchange in the ones column
- an exchange in the ones and tens columns.

Extension

Always, Sometimes, Never?

A two-digit number multiplied by a one-digit number has a two-digit product.

Explain the mistake.

H	T	O
	2	7
x		3
6	2	1

How close can you get to 100?
Use each digit card once in the multiplication.

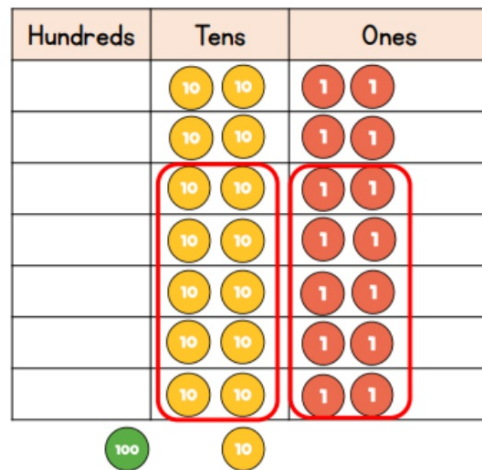
2 3 4

× =

True or False?

Multiply 2-digits by 1-digit (2)

The model shows $22 \times 7 = 154$



25.1.22

LO: To divide by partitioning.

I know how to partition a number into tens and ones.

I can share into equal groups.

I understand I must divide my tens first and then my ones.

Menu **33** X

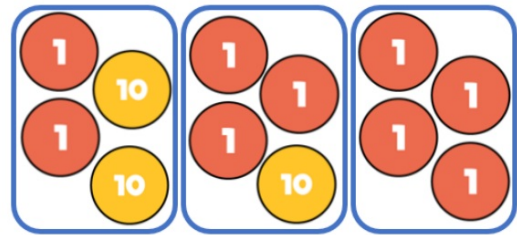
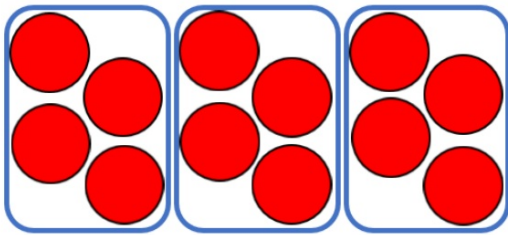
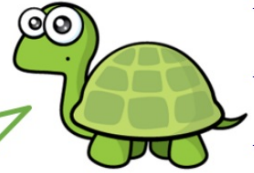
2×4	2×6	2×10	11×3
9×5	7×7	5×11	6×10
9×7	6×12	11×7	11×9

Times Tables up to 12
Hit the Question - Mixed Tables
Timer: 0:01
Score: 5/5
Topmarks

Is Tiny correct?

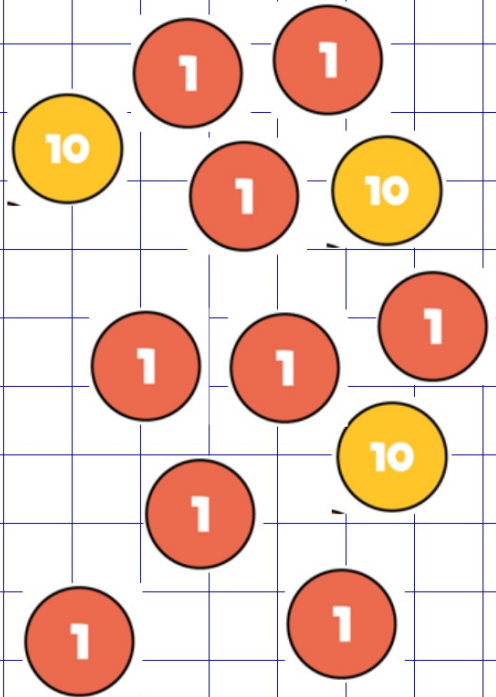


There are 4
counters in each
group.

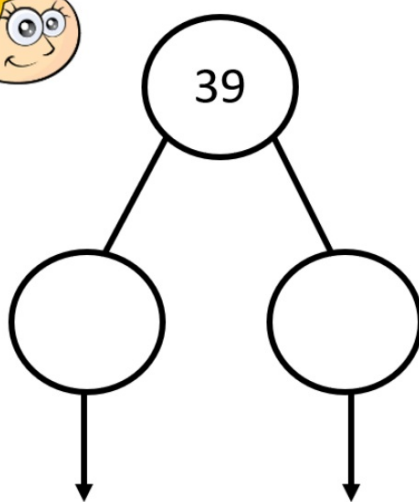
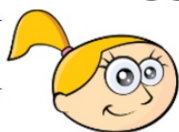


$$39 \div 3 =$$

Tens	Ones

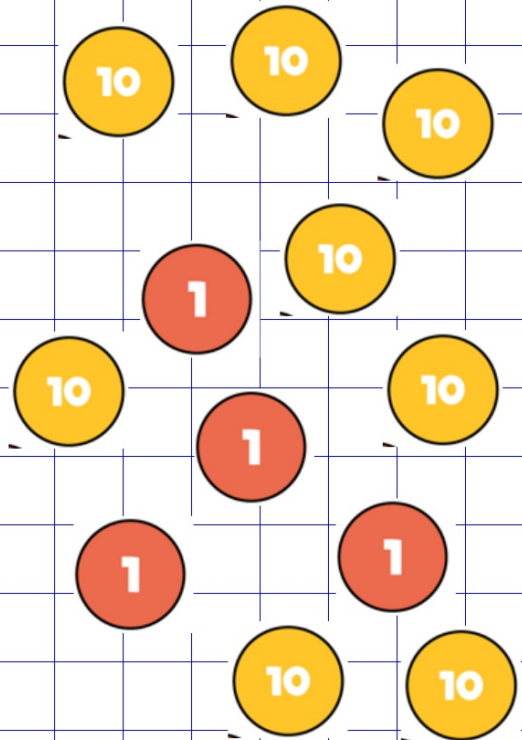


$$39 \div 3 =$$

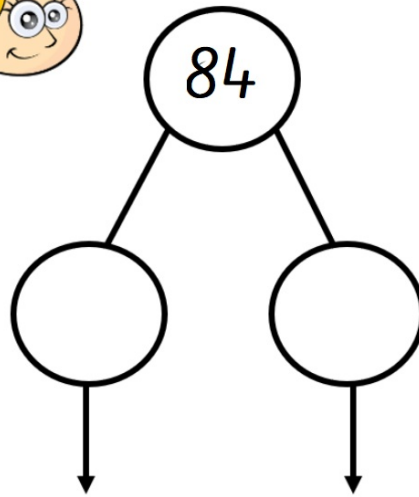


$$84 \div 4 =$$


Tens	Ones

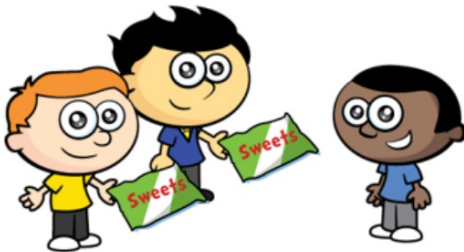


$$84 \div 4 =$$

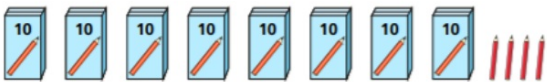


Ron and Jack each have a packet of sweets.
There are 18 sweets in each packet.
They want to share the sweets equally with Mo.
How many sweets will each boy have?

Have a think 



1 There are 84 pencils to be shared equally into 4 pots.



a) Draw the pencils on the place value chart to show how they are shared.

Tens	Ones

b) Complete the number sentences.

$$8 \text{ tens} \div 4 = \square \text{ tens}$$

$$4 \text{ ones} \div 4 = \square \text{ one}$$

$$84 \div 4 = \square$$

c) How many pencils are in each pot?

2 Use a place value chart to work out the calculations.

a) $39 \div 3$

b) $68 \div 2$

1 There are 55 pencils to be shared equally into 5 pots.



a) Draw the pencils on the place value chart to show how they are shared.

Tens	Ones

b) Complete the number sentences.

$$5 \text{ tens} \div 5 = \square \text{ ten}$$

$$5 \text{ ones} \div 5 = \square \text{ one}$$

$$55 \div 5 = \square$$





c) How many pencils are in each pot?

2 Use a place value chart to work out the calculations.

a) $45 \div 5$

b) $68 \div 2$

3 Amir solves $48 \div 2$ on a place value chart.

Tens	Ones
	
	

Complete the part-whole model to show what Amir has done.





4 Work out the divisions.

a) $69 \div 3 =$

b) $66 \div 2 =$

Complete a part-whole model for each.

3 Amir solves $48 \div 2$ on a place value chart.

Tens	Ones
	
	

Complete the part-whole model to show what Amir has done.

4 Work out the divisions.

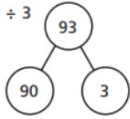
a) $65 \div 5 =$

b) $66 \div 2 =$

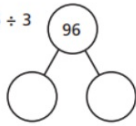
Complete a part-whole model for each.

5 Work out the divisions.

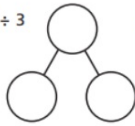
a) $93 \div 3$



$96 \div 3$



$99 \div 3$



b) $82 \div 2$ $84 \div 2$ $86 \div 2$

What do you notice?

6



88 can be divided equally by 2 and by 4

Do you agree with Annie?

Explain why.

Can Annie divide 88 equally by any other 1-digit numbers?

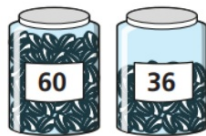
7

Esther has 2 jars of mints.

Esther shares the mints equally between 3 bowls.

How many mints are in each bowl?

How many different ways can you work out the answer?

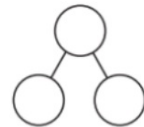
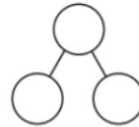
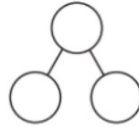


5 Work out the divisions.

$82 \div 2$

$84 \div 2$

$86 \div 2$



Extension

Teddy answers the question $44 \div 4$ using place value counters.



Tens	Ones
10 10	1 1
10 10	1 1

Is he correct?
Explain your reasoning.



Dora thinks that 88 sweets can be shared equally between eight people.

Is she correct?

Alex uses place value counters to help her calculate $63 \div 3$



Tens	Ones
10	10 1
10	10 1
10	10 1

She gets an answer of 12
Is she correct?

True or False?

Divide 2-digits by 1-digit (1)

$84 \div 2$ is equal to $80 \div 2 + 40 \div 2$

26.1.22

LO: To divide by partitioning.

I know how to partition a number into tens and ones.

I can exchange between tens and ones.

I understand I must partition a number into multiples of the divisor.

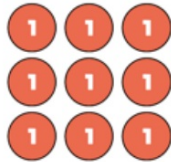
Flashback 4

Year 3 | Week 3 | Day 2

- 1) Work out $45 \div 4$
- 2) Multiply 17 by 3
- 3) How many sides do 8 pentagons have?
- 4) What is 10 less than 309?



Complete the divisions.

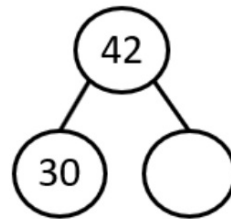
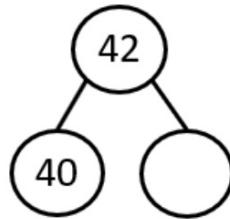
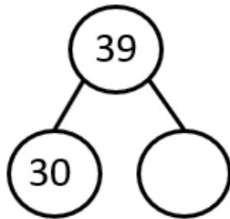


$$9 \div 3 =$$

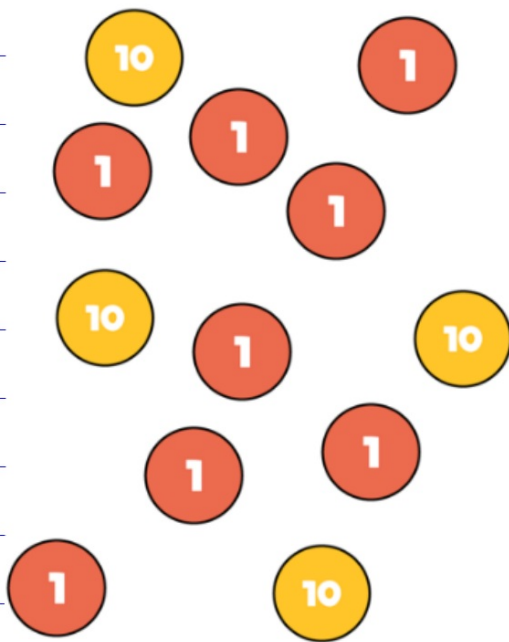


$$90 \div 3 =$$

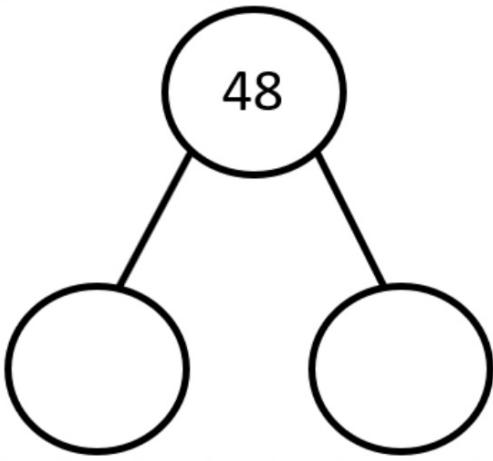
Complete the part whole models.



$$48 \div 4 =$$



Tens	Ones



$$96 \div 4 =$$



Tens	Ones

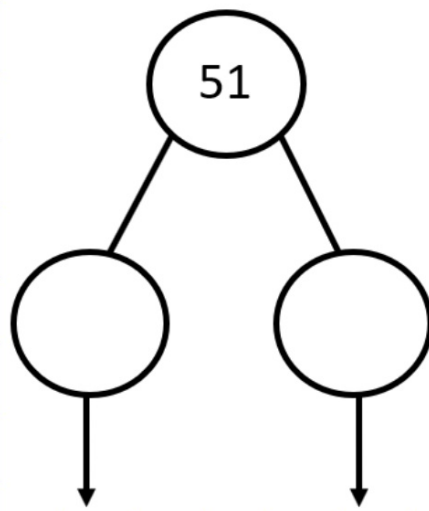
$51 \div 3 =$

1

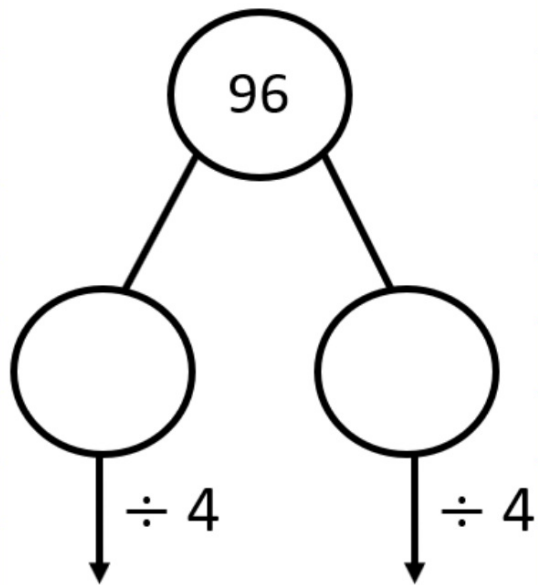
10

Tens	Ones

$$51 \div 3 =$$



$$96 \div 4 =$$





Rosie has 56 pencils.

Rosie shares the 56 pencils equally between 4 pots.

a) Draw base 10 on the place value grid to share the pencils.

Tens	Ones

b) How many pencils are in each pot?

c) Did you have to make an exchange?

2 Eva has this money.



She wants to share the money equally between 3 people.

a) Use the place value chart to show how Eva can share the money.

Tens	Ones

b) How much money does each person get?

3 Divide 72 by 3



Use the place value counters to help you.

$$72 \div 3$$

4 Use base 10 or counters to work out the divisions.

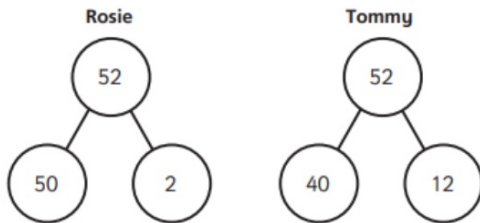
a) $45 \div 3$

b) $57 \div 3$

c) $92 \div 4$

5 Rosie and Tommy are working out $52 \div 4$

They both use a part-whole model.



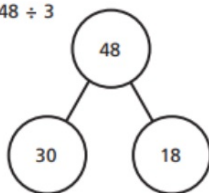
a) Whose part-whole model will help them with the division?

How do you know?

b) Use a part-whole model to work out $52 \div 4$

6 Use the part-whole models to complete the divisions.

a) $48 \div 3$

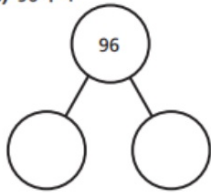


$30 \div 3 = \square$

$18 \div 3 = \square$

$48 \div 3 = \square$

b) $96 \div 4$



c) $65 \div 5$

d) $75 \div 3$

7

Here are 3 divisions.

$96 \div 8$

$96 \div 4$

$96 \div 2$

a) What is the same about the questions? What is different?

b) Complete the divisions.

$96 \div 8$

$96 \div 4$

$96 \div 2$

c) What do you notice? Talk about it with a partner.

Extension

Compare the statements using $<$, $>$ or $=$

$$48 \div 4 \bigcirc 36 \div 3$$

$$52 \div 4 \bigcirc 42 \div 3$$

$$60 \div 3 \bigcirc 60 \div 4$$

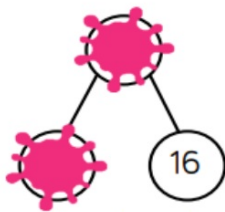
Amir partitioned a number to help him divide by 8

Some of his working out has been covered with paint.

What number could Amir have started with?



$$\text{[Painted] } \div 8$$



True or False ?

Divide 2-digits by 1-digit (2)

$$24 \div 2 > 12 \times 2$$

27.1.22

LO: To divide with a remainder.

I know what a remainder is.

I can make a link between division and repeated subtraction.

I understand how to record remainders.

Menu 33 X

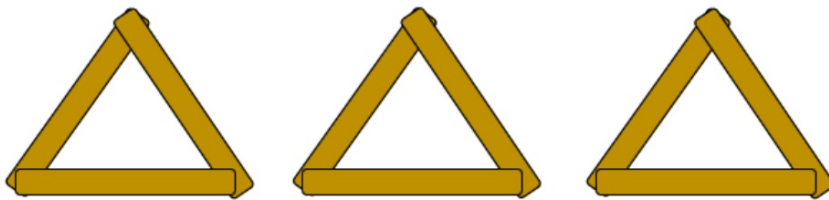
2×4	2×6	2×10	11×3
9×5	7×7	5×11	6×10
9×7	6×12	11×7	11×9

Times Tables up to 12
Hit the Question - Mixed Tables

Timer: 0:01 Score: 5/5 



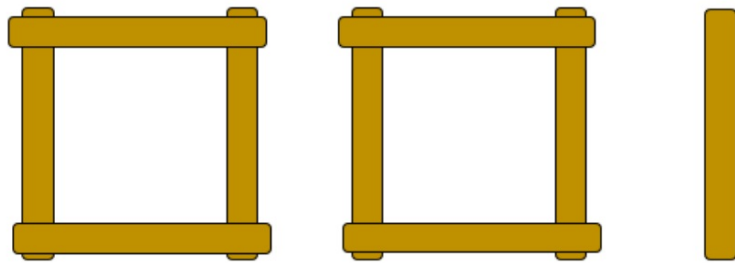
Mo has 9 lolly sticks.
He arranges his sticks to make triangles



Each triangle uses 3 sticks.
Mo can make 3 triangles with 9 sticks.

9 = 3 groups of 3
9 ÷ 3 = 3

What if Mo used his sticks to make squares?



Each square uses 4 sticks.

Mo can make 2 squares with 8 sticks.

There is 1 stick remaining.

$$8 \div 4 = 2 \text{ remainder } 1$$

What if Mo has 19 lolly sticks.
How many squares and triangles could he make?
How many sticks will be remaining each time?

triangles and stick remaining. $\div =$

squares and sticks remaining. $\div =$

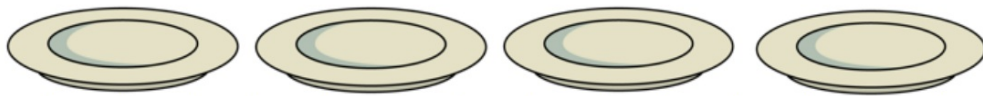
Use a whiteboard to draw the squares and triangles

$$25 \div 3 =$$

0 3 6 9 12 15 18 21 24 25

Here are 13 cakes.

They are shared equally between 4 plates.



÷

=

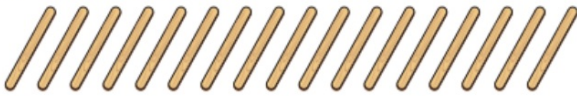
$$73 \div 3 =$$

1

10

Tens	Ones

1 Mo has these lolly sticks.



How many squares can Mo make?

$$17 \div 4 = \square \text{ remainder } \square$$

2 Mo now uses the lolly sticks to make triangles.

How many triangles can Mo make?

$$17 \div 3 = \square \text{ remainder } \square$$

3 Finally, Mo uses the lolly sticks to make pentagons.

How many pentagons can Mo make?

$$17 \div 5 = \square \text{ remainder } \square$$

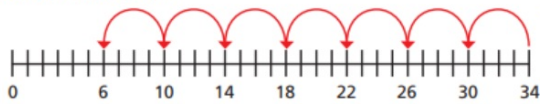
4 Use repeated subtraction to complete the divisions.

Use number lines to help you.

a) $23 \div 4 = \square$ remainder \square c) $23 \div 3 = \square$ remainder \square

b) $23 \div 5 = \square$ remainder \square

5 Eva works out $34 \div 4$



There is a remainder of 6



Is Eva correct?

How do you know?

6 Complete the calculations.

a) $29 \div \square = 4$ remainder 5

c) $29 \div \square = 14$ remainder 1

b) $29 \div \square = 4$ remainder 1

7 How do you know there is no remainder when 75 is divided by 5?

Without doing the division, what is the remainder when 76 is divided by 5?

8 Use place value counters and a place value chart to work out the divisions.

a) $87 \div 10$

b) $77 \div 2$

c) $74 \div 5$

9 Teddy has fewer than 60 marbles but more than 40

When he shares them equally into 3 pots he has no remainders.

When he shares them equally into 4 pots he has remainder 3

When he shares them equally into 5 pots he has remainder 1

How many marbles could Teddy have?

Extension

Which calculation is the odd one out?
Explain your thinking.

$$64 \div 8$$

$$77 \div 4$$

$$49 \div 6$$

$$65 \div 3$$

Jack has 15 stickers.



He sorts his stickers into equal groups but has some stickers remaining. How many stickers could be in each group and how many stickers would be remaining?

Dora and Eva are planting bulbs. They have 76 bulbs altogether.

Dora plants her bulbs in rows of 8 and has 4 left over.

Eva plants her bulbs in rows of 10 and has 2 left over.

How many bulbs do they each have?

True or False?

Divide 2-digits by 1-digits (3)

Each calculation will have a remainder.

$$16 \div 5$$

$$26 \div 5$$

$$30 \div 5$$


28.1.22

LO: To choose the most efficient method for addition and subtraction.

I know when I can complete a calculation mentally.

I can draw a range of pictorial representations.


I understand how pictorial methods help me to check my answers.


Level 5 ▾ Ordering ▾ Choose ▾ 

Addition
Subtraction
Ordering
Partitioning
Digit Values
Rounding
Multiplication
Division
Doubles/Halves
Fractions

Daily 10

Mental Maths Challenge





The image shows a screenshot of a 'Daily 10' mental maths challenge interface. It features a dark green header with navigation options: 'Level 5', 'Ordering', and 'Choose'. A sidebar on the left lists various mathematical topics: Addition, Subtraction, Ordering, Partitioning, Digit Values, Rounding, Multiplication, Division, Doubles/Halves, and Fractions. The main area has a light blue background with math symbols and a central stopwatch icon. The 'Daily 10' title is in large purple letters, and 'Mental Maths Challenge' is below it. The 'Topmarks' logo is in the bottom right corner.

Do I need to use a mental method or written method?
Discuss with a partner.

1) $15 - 7 =$

2) $30 + 30 =$

3) $200 - 100 =$

4) $498 + 79 =$

5) $199 + 199 =$

On a white board, draw out the calculation using a pictorial method.

1) $15 - 7 =$

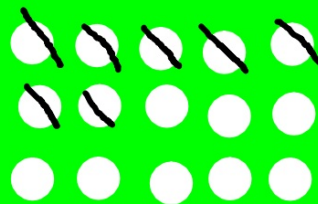
2) $30 + 30 =$

3) $200 - 100 =$

4) $498 + 79 =$

5) $199 + 199 =$

e.g. $15 - 7 =$

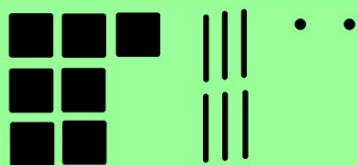


What other pictorial
methods could we draw?

For each question you will need to choose if you can do it mentally or using a column method.

You will also need to draw a pictorial representation for each question.

e.g $762 - 324 =$



$$\begin{array}{r} 762 \\ -324 \\ \hline \\ \hline \end{array}$$

a) $225+75=$

b) $364+36=$

c) $587-63=$

d) $786-293=$

e) $453-399=$

f) $281+290=$

g) $311-109=$

h) $539+261=$

i) $299+487=$

j) $633-366=$

a) $15+15=$

b) $34+36=$

c) $27-13=$

d) $37-26=$

e) $43-12=$

f) $31+29=$

g) $21-9=$

h) $34+7=$

i) $29+5=$

j) $33-16=$

Extension

Always, sometimes, never

Is it always, sometimes or never true that if you subtract a multiple of 10 from any number the units digit of that number stays the same.

Is it always, sometimes or never true that when you add two numbers together you will get an even number

Convince me

$$\square \square + \square \square + \square \square$$

The total is 201

Each missing digit is either a 9 or a 1. Write in the missing digits.

Is there only one way of doing this or lots of ways?

Convince me

True or false?

Are these number sentences true or false?
 $597 + 7 = 614$

$$804 - 70 = 744$$

$$768 + 140 = 908$$

Give your reasons.

Extension

Missing numbers

Fill in the missing numbers (using a range of practical resources to support)

$$12 + \square = 19$$

$$20 - \square = 3$$

Missing symbols

Write the missing symbols (+ - =) in these number sentences:

$$17 \square 3 \square 20$$

$$18 \square 20 \square 2$$