Spring Scheme of Learning

Year 5

#MathsEveryoneCan

2020-21
New for 2020/21

2020 will go down in history. The world has changed for all of us.

We want to do as much as we can to support children, teachers, parents and carers in these very uncertain times.

We have amended our schemes for 2020/21 to:

★ highlight key teaching points
★ recap essential content that children may have forgotten
★ flag any content that you might not have covered during the school closures period.

We hope these changes will add further value to the schemes and save you time.

Lesson-by-lesson overviews

We’ve always been reluctant to produce lesson-by-lesson overviews as every class is individual and has different needs. However, many of you have said that if blended learning becomes a key feature of school life next year, a weekly plan with linked content and videos could be really useful.

As always, we’ve listened! We’ve now produced a complete lesson-by-lesson overview for Y1 to Y9 that schools can use or adapt as they choose. Each lesson will be linked to a free-to-use home learning video, and for premium subscribers, a worksheet.

This means that you can easily assign work to your class, whether they are working at home or in school.

Inevitably, this lesson-by-lesson structure won’t suit everyone, but if it works for you, then please do make use of this resource as much as you wish.
Teaching for Mastery

These overviews are designed to support a mastery approach to teaching and learning and have been designed to support the aims and objectives of the new National Curriculum.

The overviews:

- have number at their heart. A large proportion of time is spent reinforcing number to build competency
- ensure teachers stay in the required key stage and support the ideal of depth before breadth.
- ensure students have the opportunity to stay together as they work through the schemes as a whole group
- provide plenty of opportunities to build reasoning and problem solving elements into the curriculum.

For more guidance on teaching for mastery, visit the NCETM website:

https://www.ncetm.org.uk/resources/47230

Concrete - Pictorial - Abstract

We believe that all children, when introduced to a new concept, should have the opportunity to build competency by taking this approach.

Concrete – children should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial – alongside this children should use pictorial representations. These representations can then be used to help reason and solve problems.

Abstract – both concrete and pictorial representations should support children’s understanding of abstract methods.

Need some CPD to develop this approach? Visit www.whiterosemaths.com for find a course right for you.
Supporting resources

We have produced supporting resources for every small step from Year 1 to Year 11.

The worksheets are provided in three different formats:

• Write on worksheet – ideal for children to use the ready made models, images and stem sentences.
• Display version – great for schools who want to cut down on photocopying.
• PowerPoint version – one question per slide. Perfect for whole class teaching or mixing questions to make your own bespoke lesson.

For more information visit our online training and resources centre resources.whiterosemaths.com or email us directly at support@whiterosemaths.com
Meet the Characters

Children love to learn with characters and our team within the scheme will be sure to get them talking and reasoning about mathematical concepts and ideas. Who’s your favourite?
<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
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<th>Week 5</th>
<th>Week 6</th>
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<td>Number: Addition and Subtraction</td>
<td>Statistics</td>
<td>Number: Multiplication and Division</td>
<td>Measurement: Perimeter and Area</td>
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### Overview

#### Small Steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Multiply 2-digits by 1-digit</td>
</tr>
<tr>
<td>2.</td>
<td>Multiply 3-digits by 1-digit</td>
</tr>
<tr>
<td>3.</td>
<td>Multiply 4-digits by 1-digit</td>
</tr>
<tr>
<td>4.</td>
<td>Multiply 2-digits (area model)</td>
</tr>
<tr>
<td>5.</td>
<td>Multiply 2-digits by 2-digits</td>
</tr>
<tr>
<td>6.</td>
<td>Multiply 3-digits by 2-digits</td>
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<td>7.</td>
<td>Multiply 4-digits by 2-digits</td>
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<tr>
<td>8.</td>
<td>Divide 2-digits by 1-digit (1)</td>
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<tr>
<td>9.</td>
<td>Divide 2-digits by 1-digit (2)</td>
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<td>10.</td>
<td>Divide 3-digits by 1-digit</td>
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<td>11.</td>
<td>Divide 4-digits by 1-digit</td>
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<tr>
<td>12.</td>
<td>Divide with remainders</td>
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</tbody>
</table>

### Notes for 2020/21

Before moving on to 4-digit multiplication, children may need to work with place value counters to support their understanding of multiplying by 2- and 3-digit numbers.

The division steps may look similar but this is a difficult concept and children need to spend time exploring partitioning and dividing 2- and 3-digit numbers before working with larger numbers.

In the recap steps they will cover division with remainders using place value counters.
Children build on their understanding of formal multiplication from Year 3 to move to the formal short multiplication method. Children use their knowledge of exchanging ten ones for one ten in addition and apply this to multiplication, including exchanging multiple groups of tens. They use place value counters to support their understanding.

Which column should we start with, the ones or the tens?

How are Ron and Whitney’s methods the same?

How are they different?

Can we write a list of key things to remember when multiplying using the column method?

Whitney uses place value counters to calculate $5 \times 34$

Ron also uses place value counters to calculate $5 \times 34$
Multiply 2-digits by 1-digit

Reasoning and Problem Solving

Here are three incorrect multiplications.

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<tbody>
<tr>
<td>6</td>
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<td>3</td>
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<td>×</td>
<td>4</td>
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<tr>
<td>8</td>
<td>2</td>
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</tbody>
</table>

Correct the multiplications.

Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Sometimes: 12 × 2 has only two-digits; 23 × 5 has three digits.

Never: all multiples of 8 are even.

Sometimes: most two-digit numbers need exchanging, but not 10 or 11
Children build on previous steps to represent a three-digit number multiplied by a one-digit number with concrete manipulatives. Teachers should be aware of misconceptions arising from 0 in the tens or ones column. Children continue to exchange groups of ten ones for tens and record this in a written method.

How is multiplying a three-digit number by one-digit similar to multiplying a two-digit number by one-digit?

Would you use counters to represent 84 multiplied by 8? Why?

A school has 4 house teams. There are 245 children in each house team. How many children are there altogether?

Write the multiplication represented by the counters and calculate the answer using the formal written method.
Spot the mistake

Alex and Dexter have both completed the same multiplication.

Alex

<table>
<thead>
<tr>
<th>H</th>
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<tr>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

Dexter

<table>
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<tr>
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<th>T</th>
<th>O</th>
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<tbody>
<tr>
<td>2</td>
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<td>4</td>
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</table>

Who has the correct answer?
What mistake has been made by one of the children?

Dexter has the correct answer.
Alex has forgotten to add the two hundreds she exchanged from the tens column.

Teddy and his mum were having a reading competition.
In one month, Teddy read 814 pages.

His mum read 4 times as many pages as Teddy.
How many pages did they read altogether?
How many fewer pages did Teddy read?
Use the bar model to help.

Teddy

Mum

814

814

814

814

814

They read 4,070 pages altogether.
814 x 3 = 2,442
Teddy read 2,442 fewer pages than his mum.
Multiply 4-digits by 1-digit

Notes and Guidance

Children build on previous steps to represent a 4-digit number multiplied by a 1-digit number using concrete manipulatives.

Teachers should be aware of misconceptions arising from using 0 as a place holder in the hundreds, tens or ones column.

Children then move on to explore multiplication with exchange in one, and then more than one column.

Mathematical Talk

Why is it important to set out multiplication using columns?

Explain the value of each digit in your calculation.

How do we show there is nothing in a place value column?

What do we do if there are ten or more counters in a place value column?

Which part of the multiplication is the product?

Varied Fluency

Complete the calculation.

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>100</td>
<td>111</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>111</td>
<td>1</td>
</tr>
<tr>
<td>1000</td>
<td>100</td>
<td>111</td>
<td>1</td>
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</tbody>
</table>

Remember if there are ten or more counters in a column, you need to make an exchange.

Annie earns £1,325 per week. How much would she earn in 4 weeks?

<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
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</thead>
<tbody>
<tr>
<td>1000</td>
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<td>1 3 2 5</td>
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× 4

Write the multiplication calculation represented and find the answer.

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<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
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<tbody>
<tr>
<td>1000</td>
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<th>Th H T O</th>
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<tr>
<td>1 0 2 3</td>
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</table>

× 3
Reasoning and Problem Solving

Alex calculated $1,432 \times 4$

Here is her answer.

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<th>O</th>
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<tbody>
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<td>4</td>
<td>3</td>
<td>2</td>
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<td></td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>12</td>
<td>8</td>
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</table>

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

Can you explain what Alex has done wrong?

Alex has not exchanged when she has got 10 or more in the tens and hundreds columns.

Can you work out the missing numbers using the clues?

- 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.

$2,345 \times 5 = 11,725$
Children use Base 10 to represent the area model of multiplication, which will enable them to see the size and scale linked to multiplying.

Children will then move on to representing multiplication more abstractly with place value counters and then numbers.

**Mathematical Talk**

What are we multiplying?
What can we partition these numbers?

Where can we see 20 × 20?
What does the 40 represent?

What’s the same and what’s different between the three representations (Base 10, place value counters, grid)?

**Varied Fluency**

Whitney uses Base 10 to calculate 23 × 22

How could you adapt your Base 10 model to calculate these:

32 × 24   25 × 32   35 × 32

Rosie adapts the Base 10 method to calculate 44 × 32

Compare using place value counters and a grid to calculate:

45 × 42   52 × 24   34 × 43
Multiply 2-digits (Area Model)

Reasoning and Problem Solving

Eva says,

To multiply 23 by 57 I just need to calculate $20 \times 50$ and $3 \times 7$ 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.

- Eva’s calculation does not include $20 \times 7$ and $50 \times 3$
- Children can show this with concrete or pictorial representations.

Amir needs 8 more hundreds, $40 \times 40 = 1,600$ and he only has 800

His calculation is $42 \times 46 = 1,932$

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.

Dora is wrong. Children may prove this with concrete or pictorial representations.
Children will move on from the area model and work towards more formal multiplication methods.

They will start by exploring the role of the zero in the column method and understand its importance.

Children should understand what is happening within each step of the calculation process.

Why is the zero important?

What numbers are being multiplied in the first line and in the second line?

When do we need to make an exchange?

What can we exchange if the product is 42 ones?

If we know what $38 \times 12$ is equal to, how else could we work out $39 \times 12$?

**Mathematical Talk**

**Notes and Guidance**

**Varied Fluency**

Complete the calculation to work out $23 \times 14$

$$
\begin{array}{c|c}
2 & 3 \\
\hline
1 & 4 \\
\hline
9 & 2 \\
\hline
2 & 3 & 0 \\
\end{array}
$$

Use this method to calculate:

$34 \times 26$, $58 \times 15$, $72 \times 35$

Complete to solve the calculation.

$$
\begin{array}{c|c}
4 & 6 \\
\hline
2 & 7 \\
\hline
3 & 2 & 2 \\
\hline
9 & 2 & 0 \\
\end{array}
$$

Use this method to calculate:

$27 \times 39$, $46 \times 55$, $94 \times 49$

**Calculate:**

$38 \times 12$, $39 \times 12$, $38 \times 11$

What's the same? What's different?
Reasoning and Problem Solving

Multiply 2-digits by 2-digits

Tommy says,

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

Do you agree? Explain your answer.

Children may use a trial and error approach during which they'll further develop their multiplication skills.

They will find that Tommy is wrong because $27 \times 37$ is equal to 999

Amir has multiplied 47 by 36

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

Alex says,

Alex is correct. Amir has forgotten to use zero as a place holder when multiplying by 3 tens.

Who is correct? What mistake has been made?

Amir has multiplied 47 by 36
Multiply 3-digits by 2-digits

Notes and Guidance

Children will extend their multiplication skills to multiplying 3-digit numbers by 2-digit numbers. They will use multiplication to find area and solve multi-step problems. Methods previously explored are still useful e.g. using an area model.

Mathematical Talk

Why is the zero important?

What numbers are being multiplied in the first line and the second line?

When do we need to make an exchange?

What happens if there is an exchange in the last step of the calculation?

Varied Fluency

Complete:

\[
\begin{array}{c|c|c|c|c}
& 1 & 3 & 2 \\
\hline
\times & 1 & 4 \\
\hline
& 5 & 2 & 8 \\
\hline
& 1 & 3 & 2 & 0 \\
\end{array}
\]

Use this method to calculate:

\((132 \times 4)\)

\((132 \times 10)\)

What do you notice about your answers?

Calculate:

\[637 \times 24\]

\[573 \times 28\]

\[573 \times 82\]

A playground is 128 yards by 73 yards.

Calculate the area of the playground.
Multiply 3-digits by 2-digits

Reasoning and Problem Solving

The pattern stops at up to $28 \times 111$ because exchanges need to take place in the addition step.

What do you think the answer to $25 \times 111$ will be?

What do you notice?

Does this always work?

Pencils come in boxes of 64
A school bought 270 boxes.

Rulers come in packs of 46
A school bought 720 packs.

How many more rulers were ordered than pencils?

Here are examples of Dexter’s maths work.

In his first calculation, Dexter has forgotten to use a zero when multiplying by 7 tens.
It should have been $987 \times 76 = 75,012$

In the second calculation, Dexter has not included his final exchanges.
The final answer should have been $25,272$

Correct each calculation.

Can you spot it and explain why it’s wrong?

Multiply 3-digits by 2-digits

Year 5 | Spring Term | Week 1 to 3 – Number: Multiplication & Division
Notes and Guidance

Children will build on their understanding of multiplying a 3-digit number by a 2-digit number and apply this to multiplying 4-digit numbers by 2-digit numbers.

It is important that children understand the steps taken when using this multiplication method.

Methods previously explored are still useful e.g. grid.

Mathematical Talk

Explain the steps followed when using this multiplication method.

Look at the numbers in each question, can they help you estimate which answer will be the largest?

Explain why there is a 9 in the thousands column.

Why do we write the larger number above the smaller number?

What links can you see between these questions? How can you use these to support your answers?

Varied Fluency

Use the method shown to calculate $2,456 \times 34$

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</table>

(3,250 × 6)

(3,250 × 20)

Calculate

$3,282 \times 32$

$7,132 \times 21$

$9,708 \times 38$

Use $<$, $>$ or $=$ to make the statements correct.

$4,458 \times 56$  $4,523 \times 54$

$4,458 \times 55$  $4,523 \times 54$

$4,458 \times 55$  $4,522 \times 54$
Multiply 4-digits by 2-digits

Reasoning and Problem Solving

Spot the Mistakes

Can you spot and correct the errors in the calculation?

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There are 2 errors. In the first line of working, the exchanged ten has not been added. In the second line of working, the place holder is missing. The correct answer should be 58,282

Teddy has spilt some paint on his calculation.

The missing digits are all 8

What are the missing digits?

What do you notice?
Divide 2-digits by 1-digit (1)

Notes and Guidance

Children build on their knowledge of dividing a 2-digit number by a 1-digit number from Year 3 by sharing into equal groups.

Children use examples where the tens and the ones are divisible by the divisor, e.g. 96 divided by 3 and 84 divided by 4. They then move on to calculations where they exchange between tens and ones.

Mathematical Talk

How can we partition 84? How many rows do we need to share equally between?

If I cannot share the tens equally, what do I need to do? How many ones will I have after exchanging the tens?

If we know $96 \div 4 = 24$, what will $96 \div 8$ be? What will $96 \div 2$ be? Can you spot a pattern?

Varied Fluency

Jack is dividing 84 by 4 using place value counters.

First, he divides the tens.

Then, he divides the ones.

Use Jack’s method to calculate:

- $69 \div 3$
- $88 \div 4$
- $96 \div 3$

Rosie is calculating 96 divided by 4 using place value counters. First, she divides the tens. She has one ten remaining so she exchanges one ten for ten ones. Then, she divides the ones.

Use Rosie’s method to solve:

- $65 \div 5$
- $75 \div 5$
- $84 \div 6$
**Reasoning and Problem Solving**

Dora is calculating $72 \div 3$
Before she starts, she says the calculation will involve an exchange.

Do you agree?
Explain why.

Dora is correct because 70 is not a multiple of 3 so when you divide 7 tens between 3 groups there will be one remaining which will be exchanged.

Eva has 96 sweets.
She shares them into equal groups.
She has no sweets left over.
How many groups could Eva have shared her sweets into?

**Possible answers**

$96 \div 1 = 96$
$96 \div 2 = 48$
$96 \div 3 = 32$
$96 \div 4 = 24$
$96 \div 6 = 16$
$96 \div 8 = 12$

<table>
<thead>
<tr>
<th>Use $&lt;$, $&gt;$ or $=$ to complete the statements.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$69 \div 3$ $&lt;$ $96 \div 3$</td>
</tr>
<tr>
<td>$96 \div 4$ $&lt;$ $96 \div 3$</td>
</tr>
<tr>
<td>$91 \div 7$ $&lt;$ $84 \div 6$</td>
</tr>
</tbody>
</table>
Notes and Guidance

Children explore dividing 2-digit numbers by 1-digit numbers involving remainders.

They continue to use the place value counters to divide in order to explore why there are remainders. Teachers should highlight, through questioning, that the remainder can never be greater than the number you are dividing by.

Mathematical Talk

If we are dividing by 3, what is the highest remainder we can have?

If we are dividing by 4, what is the highest remainder we can have?

Can we make a general rule comparing our divisor (the number we are dividing by) to our remainder?

Teddy is dividing 85 by 4 using place value counters. First, he divides the tens. Then, he divides the ones.

Use Teddy's method to calculate:
86 ÷ 4  87 ÷ 4  88 ÷ 4  97 ÷ 3  98 ÷ 3  99 ÷ 3

Whitney uses the same method, but some of her calculations involve an exchange.

Use Whitney’s method to solve
57 ÷ 4
58 ÷ 4
58 ÷ 3
Rosie writes, 
\[85 \div 3 = 28 \text{ r } 1\]
She says 85 must be 1 away from a multiple of 3
Do you agree?

I agree, remainder 1 means there is 1 left over. 85 is one more than 84 which is a multiple of 3

Whitney is thinking of a 2-digit number that is less than 50
When it is divided by 2, there is no remainder.
When it is divided by 3, there is a remainder of 1
When it is divided by 5, there is a remainder of 3
What number is Whitney thinking of?

37 sweets are shared between 4 friends. How many sweets are left over?

Four children attempt to solve this problem.
- Alex says it’s 1
- Mo says it’s 9
- Eva says it’s 9 r 1
- Jack says it’s 8 r 5

Can you explain who is correct and the mistakes other people have made?

Alex is correct as there will be one remaining sweet.
Mo has found how many sweets each friend will receive.
Eva has written the answer to the calculation.
Jack has found a remainder that is larger than the divisor so is incorrect.

Whitney is thinking of 28

37 sweets are shared between 4 friends. How many sweets are left over?

Four children attempt to solve this problem.
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Whitney is thinking of 28
Divide 3-digits by 1-digit

Notes and Guidance
Children apply their previous knowledge of dividing 2-digit numbers to divide a 3-digit number by a 1-digit number.

They use place value counters and part-whole models to support their understanding.

Children divide numbers with and without remainders.

Mathematical Talk
What is the same and what’s different when we are dividing 3-digit number by a 1-digit number and a 2-digit number by a 1-digit number?

Do we need to partition 609 into three parts or could it just be partitioned into two parts?

Can we partition the number in more than one way to support dividing more efficiently?

Varied Fluency
Annie is dividing 609 by 3 using place value counters.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>1</td>
</tr>
</tbody>
</table>

Use Annie’s method to calculate the divisions.
906 ÷ 3  884 ÷ 4  884 ÷ 8  489 ÷ 2

Rosie is using flexible partitioning to divide 3-digit numbers. She uses her place value counters to support her.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>981</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Use Rosie’s method to solve:
726 ÷ 6  846 ÷ 6  846 ÷ 7
Dexter is calculating $208 \div 8$ using part-whole models. Can you complete each model?

208 ÷ 8 = 26  
80 ÷ 8 = 10  
48 ÷ 8 = 6  
160 ÷ 8 = 20  
40 ÷ 8 = 5  
8 ÷ 8 = 1

Children can then make a range of part-whole models to calculate $132 \div 4$.

e.g.  
100 ÷ 4 = 25  
32 ÷ 4 = 8

You have 12 counters and the place value grid. You must use all 12 counters to complete the following.

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
</table>

Create a 3-digit number divisible by 2
Create a 3-digit number divisible by 3
Create a 3-digit number divisible by 4
Create a 3-digit number divisible by 5
Can you find a 3-digit number divisible by 6, 7, 8 or 9?

2: Any even number
3: Any 3-digit number (as the digits add up to 12, a multiple of 3)
4: A number where the last two digits are a multiple of 4
5: Any number with 0 or 5 in the ones column.
Possible answers
6: Any even number
7: 714, 8: 840
9: Impossible
Children use their knowledge from Year 4 of dividing 3-digit numbers by a 1-digit number to divide up to 4-digit numbers by a 1-digit number.

They use place value counters to partition their number and then group to develop their understanding of the short division method.

Here is a method to calculate 4,892 divided by 4 using place value counters and short division.

Use this method to calculate:
- 6,610 ÷ 5
- 2,472 ÷ 3
- 9,360 ÷ 4

Mr Porter has saved £8,934.
He shares it equally between his three grandchildren.
How much do they each receive?

Use <, > or = to make the statements correct.

3,495 ÷ 5 ___ 3,495 ÷ 3
8,064 ÷ 7 ___ 9,198 ÷ 7
7,428 ÷ 4 ___ 5,685 ÷ 5
Jack is calculating $2,240 \div 7$.

He says you can't do it because 7 is larger than all of the digits in the number.

Do you agree with Jack? Explain your answer.

Jack is incorrect. You can exchange between columns. You can't make a group of 7 thousands out of 2 thousand, but you can make groups of 7 hundreds out of 22 hundreds.

The answer is 320.

Spot the Mistake

Explain and correct the working.

There is no exchanging between columns within the calculation. The final answer should have been 3,138.
Children continue to use place value counters to partition and then group their number to further develop their understanding of the short division method.

They start to focus on remainders and build on their learning from Year 4 to understand remainders in context. They do not represent their remainder as a fraction at this point.

Here is a method to solve 4,894 divided by 4 using place value counters and short division.

Use this method to calculate:
6,613 ÷ 5
2,471 ÷ 3
9,363 ÷ 4

Muffins are packed in trays of 6 in a factory.
In one day, the factory makes 5,623 muffins.
How many trays do they need?
How many trays will be full?
Why are your answers different?

For the calculation 8,035 ÷ 4
• Write a number story where you round the remainder up.
• Write a number story where you round the remainder down.
• Write a number story where you have to find the remainder.
I am thinking of a 3-digit number.

When it is divided by 9, the remainder is 3

When it is divided by 2, the remainder is 1

When it is divided by 5, the remainder is 4

What is my number?

Possible answers:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>129</td>
<td>219</td>
</tr>
<tr>
<td>309</td>
<td>399</td>
</tr>
<tr>
<td>489</td>
<td>579</td>
</tr>
<tr>
<td>669</td>
<td>759</td>
</tr>
<tr>
<td>849</td>
<td>939</td>
</tr>
</tbody>
</table>

Always, Sometimes, Never?

A three-digit number made of consecutive descending digits divided by the next descending digit always has a remainder of 1

765 ÷ 4 = 191 remainder 1

How many possible examples can you find?

Sometimes

Possible answers:

432 ÷ 1 = 432 r 0
543 ÷ 2 = 271 r 1
654 ÷ 3 = 218 r 0
765 ÷ 4 = 191 r 1
876 ÷ 5 = 175 r 1
987 ÷ 6 = 164 r 3