Homework/Extension
Step 7: Divide with Remainders

Teaching note: We have included grids for short division and recommend that this resource is printed in colour or greyscale.

National Curriculum Objectives:

Mathematics Year 5: (5C7b) Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Complete the comparison statement. No use of zero as a place holder and no exchanges. Short method of division supported by place value grid and showing grouping.
Expected Complete the comparison statement. Some use of zero as a place holder and includes up to two exchanges. Some pictorial support, for example place value counters to support with exchanging.
Greater Depth Complete the calculation to make the comparison statement correct. Use of zero as a place holder and including up to three exchanges, where some numbers within calculations are incomplete.

Questions 2, 5 and 8 (Varied Fluency)
Developing Complete the Carroll diagram. No use of zero as a place holder and no exchanges. Short method of division supported by suggestion of using a place value grid.
Expected Complete the Carroll diagram. Some use of zero as a place holder and includes up to two exchanges.
Greater Depth Complete the Carroll diagram. Use of zero as a place holder and includes up to three exchanges.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify the missing digits. No use of zero as a place holder and no exchanges.
Expected Identify the missing digits. Some use of zero as a place holder and includes up to two exchanges.
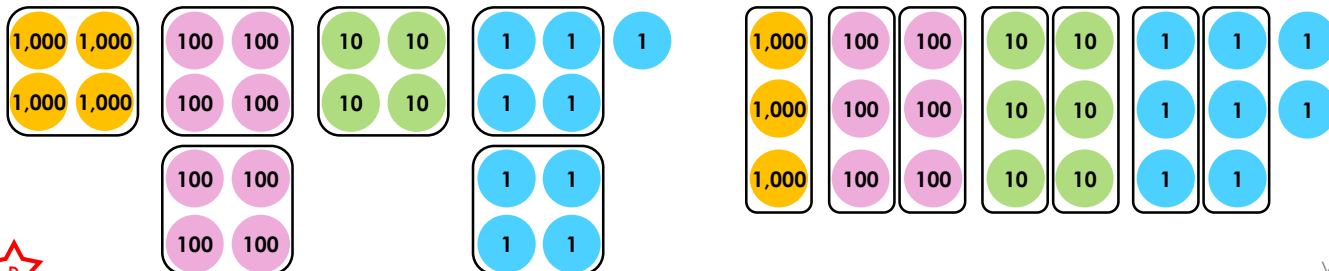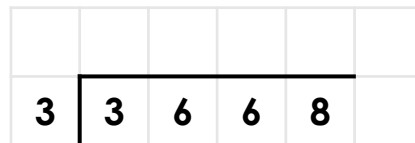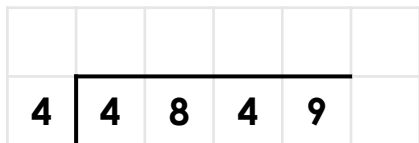**Greater Depth** Identify the missing digits. Use of zero as a place holder and includes up to three exchanges. Remainders given as additional parameter.

More Year 5 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

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Divide with Remainders

1. Use >, < or = to complete the statement below.

	4	8	4	9
4				

$\boxed{}$

	3	6	6	8
3				

Left side counters:
1,000 1,000 | 100 100 | 10 10 | 1 1 1
1,000 1,000 | 100 100 | 10 10 | 1 1
             100 100 | | 1 1
             100 100 | | 1 1

Right side counters:
1,000 | 100 100 | 10 10 | 1 1 1
1,000 | 100 100 | 10 10 | 1 1 1
1,000 | 100 100 | 10 10 | 1 1

2. Complete the Carroll diagram. Use place value counters to help you.

	Remainder of 1	Remainder of 2
Answer between 1,000 and 3,000		
Answer above 3,000		

3,364 ÷ 3	4,486 ÷ 4	6,425 ÷ 2	9,635 ÷ 3

3. Find the missing digits.

	3	2	▨	2	▨
3	▨	▨	3	7	

	4	2	▨	2	r1
2	8	▨	6	▨	

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Homework/Extension – Divide with Remainders – Year 5 Developing
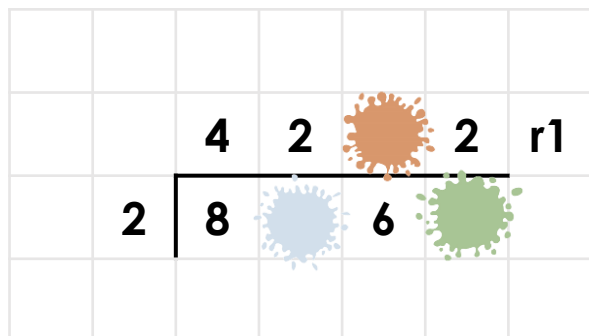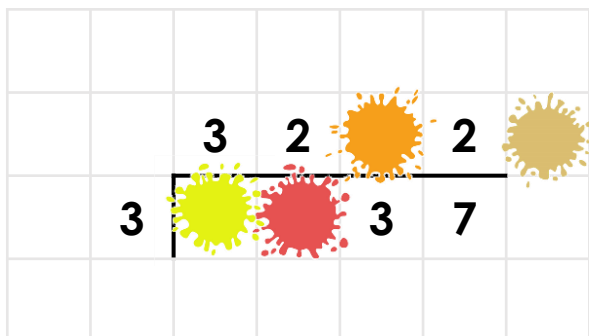
Divide with Remainders

4. Use >, < or = to complete the statement below.

6	7	8	4	6

☐

7	9	1	4	7

1,000 1,000 1,000 100 100 100 10 10 1 1
1,000 1,000 100 100 100 10 1 1
1,000 1,000 100 100 10 1 1

1,000 1,000 1,000 100 10 10 1 1 1
1,000 1,000 1,000 10 1 1
1,000 1,000 1,000 10 1 1

☆ E
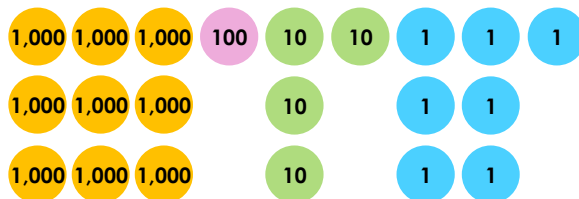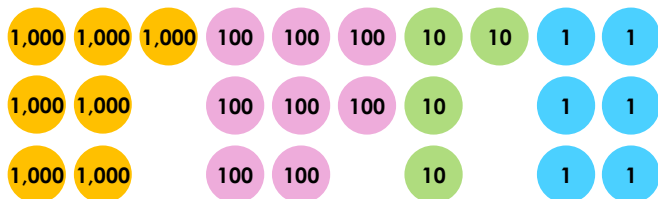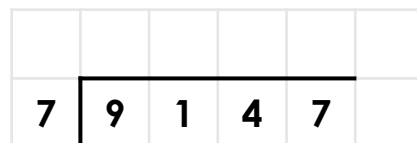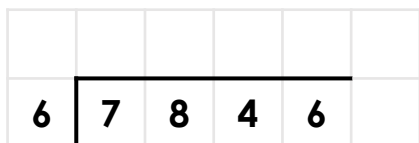
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HW/Ext

5. Complete the Carroll diagram.

	Remainder of or between 1 and 3	Remainder of or between 4 and 7
Answer below 1,000		
Answer above 1,000		

2,345 ÷ 3	5,696 ÷ 7	6,609 ÷ 5	7,629 ÷ 6

☆ E

VF
HW/Ext

6. Find the missing digits.

	1	2	▨	7	▨
6	▨	▨	4	7	

	1	2	▨	1	▨
8	9	▨	1	▨	

☆ E

RPS
HW/Ext

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Homework/Extension – Divide with Remainders – Year 5 Expected

Divide with Remainders

7. Complete the calculation to make the statement correct.

6	1	3	4	5

<

	1		2		r7
8	☐	9	☐	☐	

8. Complete the Carroll diagram.

	Remainder is a prime number	Remainder is a composite number
Answer below 1,000		
Answer above 1,000		

4,524 ÷ 5	8,486 ÷ 7	4,239 ÷ 6	9,816 ÷ 9

9. Find the missing digits so that both calculations have a remainder of 5.

		7	1	r5
9	☐	5	☐	☐

	1	☐	☐	☐	r5
7	9	☐	6	☐	

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Homework/Extension – Divide with Remainders – Year 5 Greater Depth

Developing

1. **<**

2.

	Remainder of 1	Remainder of 2
Answer between 1,000 and 3,000	3,364 ÷ 3 = 1,121 r1	4,486 ÷ 4 = 1,121 r2
Answer above 3,000	6,425 ÷ 2 = 3,212 r1	9,635 ÷ 3 = 3,211 r2

3.

```
        3  2  1  2  r1              4  2  3  2  r1
    3 | 9  6  3  7              2 | 8  4  6  5
```

Expected

4. **>**

5.

	Remainder of or between 1 and 3	Remainder of or between 4 and 7
Answer below 1,000	2,345 ÷ 3 = 781 r2	5,696 ÷ 7 = 813 r5
Answer above 1,000	7,629 ÷ 6 = 1,271 r3	6,609 ÷ 5 = 1,321 r4

6.

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        1  2  0  7  r5              1  2  0  1  r6
    6 | 7  2  4  7              8 | 9  6  1  4
```

Greater Depth

7. 8,967 ÷ 8 = 1,120 r7

8.

	Remainder is a prime number	Remainder is a composite number
Answer below 1,000	4,239 ÷ 6 = 706 r3	4,524 ÷ 5 = 904 r4
Answer above 1,000	8,486 ÷ 7 = 1,212 r2	9,816 ÷ 9 = 1,201 r6

9. Various answers, for example:

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        1  7  1  r5                 1  3  8  0  r5
    9 | 1  5  4  4              7 | 9  6  6  5
```