Homework/Extension
Step 7: Long Division 3

National Curriculum Objectives:

Mathematics Year 6: (6C7c) Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context
Mathematics Year 6: (6C8) Solve problems involving addition, subtraction, multiplication and division

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Complete long division calculations (expanded and formal methods) to divide 3-digit numbers by a 2-digit number no greater than 20. Key multiplication facts given. Includes remainders.
Expected Complete long division calculations (expanded and formal methods) to divide 3-digit numbers by a 2-digit number. Key multiplication facts grid partially completed. Includes remainders.
Greater Depth Complete long division calculations (expanded and formal methods) to divide 3-digit numbers by any 2-digit number. No key multiplication facts grids given. Includes remainders.

Questions 2, 5 and 8 (Varied Fluency)
Developing Match division calculations to remainders using long division to divide 3-digit numbers by a 2-digit number no greater than 20. Key multiplication facts given. Includes remainders.
Expected Match division calculations to remainders using long division to divide 3-digit numbers by a 2-digit number. Key multiplication facts grid partially completed. Includes remainders.
Greater Depth Match division calculations to remainders using long division to divide 3-digit numbers by a 2-digit number. No key multiplication facts grids given. Includes remainders.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Explain which statement is correct using long division to divide 3-digit numbers by a 2-digit number no greater than 20. Key multiplication facts given. Includes remainders.
Expected Explain which statement is correct using long division to divide 3-digit numbers by a 2-digit number. Key multiplication facts grid partially completed. Includes remainders.
Greater Depth Explain which statement is correct using long division to divide 3-digit numbers by a 2-digit number. No key multiplication facts grids given. Includes remainders.

More Year 6 Four Operations resources.

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

Long Division 3

1. Alfie is solving these division problems. He is using a different method for each calculation. Complete his working out.

1	2	1	9	6	
	–	1	2	0	(x 10)

		0	1		
1	2	2	2	0	
		1	2	↓	
		1	0	0	

Helpful facts	
1 x 1 2 =	1 2
2 x 1 2 =	2 4
3 x 1 2 =	3 6
4 x 1 2 =	4 8
5 x 1 2 =	6 0
1 0 x 1 2 =	1 2 0

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2. Draw lines to match the calculations to the remainder that will be left over.

232 ÷ 15	5
181 ÷ 11	7
294 ÷ 15	9

Helpful facts	
1 x 1 1 =	1 1
2 x 1 1 =	2 2
3 x 1 1 =	3 3
4 x 1 1 =	4 4
5 x 1 1 =	5 5
1 0 x 1 1 =	1 1 0

Helpful facts	
1 x 1 5 =	1 5
2 x 1 5 =	3 0
3 x 1 5 =	4 5
4 x 1 5 =	6 0
5 x 1 5 =	7 5
1 0 x 1 5 =	1 5 0

D

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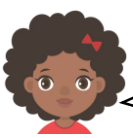
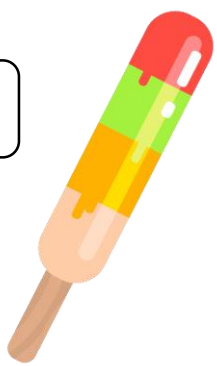
3. The school need to take 223 ice lollies to their field for Sports Day.

Kelly and Laura are packing the ice lollies into boxes. Each box holds 12 ice lollies and they must pack all of the ice lollies.

Laura: We will need 19 boxes.



Kelly: We will need 18 boxes.



Who is correct? Explain your answer.

Helpful facts	
1 x 1 2 =	1 2
2 x 1 2 =	2 4
3 x 1 2 =	3 6
4 x 1 2 =	4 8
5 x 1 2 =	6 0
1 0 x 1 2 =	1 2 0

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Long Division 3

4. William is solving these division problems. He is using a different method for each calculation. Complete his working out.

1	3	1	8	9	
	–	1	3	0	(x 10)

		0	2		
1	3	2 3	1 3	9	
		2	6	↓	
		0	7	9	

Helpful facts	
2 x 1 3 =	2 6
5 x 1 3 =	6 5
1 0 x 1 3 =	1 3 0
2 0 x 1 3 =	2 6 0

VF
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5. Draw lines to match the calculations to the remainder that will be left over.

582 ÷ 16	8
482 ÷ 12	6
504 ÷ 16	2

Helpful facts	
2 x 1 2 =	2 4
5 x 1 2 =	6 0
1 0 x 1 2 =	1 2 0
2 0 x 1 2 =	2 4 0

Helpful facts	
2 x 1 6 =	3 2
5 x 1 6 =	8 0
1 0 x 1 6 =	1 6 0
2 0 x 1 6 =	3 2 0

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6. A school canteen has baked 294 cookies ready for the school fair.

Frank and Viki are packing the cookies into boxes. Each box holds 18 cookies and they must pack all of the cookies.

Frank: We will need 16 boxes.

Viki: We will need 17 boxes.

Who is correct? Explain your answer.

Helpful facts	
2 x 1 8 =	3 6
5 x 1 8 =	9 0
1 0 x 1 8 =	1 8 0
2 0 x 1 8 =	3 6 0

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Long Division 3

7. Luke is solving these division problems. He is using a different method for each calculation. Complete his working out.

1	7	7	2	7			
	–				(x	)	

1	7	6	5	5			
				↓			

GD

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8. Draw lines to match the calculations to the remainder that will be left over.

710 ÷ 19	7
860 ÷ 23	8
653 ÷ 15	9

GD

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9. The Year 6 class are packing 754 lollies for a school event.

Jake and Michael are packing the lollies into bags. Each bag holds 21 lollies and they must pack all of the lollies.

Michael: We will need 36 bags.

Jake: We will need 35 bags.

Who is correct? Explain your answer.

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Developing

1. 196 ÷ 12 = 16 r4; 220 ÷ 12 = 18 r4
2. 232 ÷ 15 = 15 r7; 181 ÷ 11 = 16 r5; 294 ÷ 15 = 19 r9
3. Laura is correct. They will need 19 boxes because they will fill 18 boxes, but will need an extra box for the 7 ice lollies left over.

Expected

4. 189 ÷ 13 = 14 r7; 339 ÷ 13 = 26 r1
5. 582 ÷ 16 = 36 r6; 482 ÷ 12 = 40 r2; 504 ÷ 16 = 31 r8
6. Viki is correct. They will need 17 boxes because they will fill 16 boxes, but will need an extra box for the 6 cookies left over.

Greater Depth

7. 727 ÷ 17 = 42 r13; 655 ÷ 17 = 38 r9
8. 710 ÷ 19 = 37 r7; 860 ÷ 23 = 37 r9; 653 ÷ 15 = 43 r8
9. Michael is correct. They will need 36 bags because they will fill 35 bags, but will need an extra bag for the 19 lollies left over.