Week 11, Day 4 Written multiplication and division

Each day covers one maths topic. It should take you about 1 hour or just a little more.

with a teacher or another grown-up.

1.

If possible, watch the PowerPoint presentation

OR start by carefully reading through the Learning Reminders.

2. Think you've got it? Have a go at the **Investigation** or **Practical Activity**.

 Have I mastered the topic? A few questions to Check your understanding.
Fold the page to hide the answers!







Learning Reminders



Learning Reminders



Learning Reminders





22 23 28 29 16 17 18 13 14 15 24 25 10 11 12 3 4 **Investigation Hot** Division digit surprise су С Write a 3-digit number with all digits the same, e.g. 444. • ω Add the three digits, e.g. 4 + 4 + 4 = 12. Use either short division or long division to divide your 3-digit number by the sum of the digits, e.g. $444 \div 12$. ယ္တ Write down your answer. Repeat for as many other 3-digit numbers (all digits the same) as you can. What happens? B æ B \$ 6 © Hamilton Trust. Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton L 9L SL **Z**9 95 SS 6L LL EL 2L 25 23 24 TS TL O/ 59 09 **T9**

1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	30
001	Investigation Super Hot	31
6	Amazina 6720	32
<mark>98</mark>		3
6	Solve the following divisions:	34
96		S,
95	a. 6/20 ÷ 2 =	36
94	b. 6720 ÷ 4 =	37
33	c. 6720 ÷ 6 =	38
5	d. 6720 ÷ 8 =	39
1	e. 6720 ÷ 10 =	40
⁹⁰	f. 6720 ÷ 12 =	41
e S	g. 6720 ÷ 14 =	A2
~	h. 6720 ÷ 16 =	43
5		4
9	All your answers should be whole numbers Why is that?	4 5
°°	Super englished f ind a number which leaves no remainders when divided by 2.3.4.5.6.7	46
80	and 8. Is this the smallest such number? What other numbers share this property?	47
3 84		48
80		49
81 ⁸²	© Hamilton Trust. Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton	50
08	25 23 24 22 29 21 28 23 60 61 65 63 64 62 69 69 69 68 63 50 17 15 13 14 52 19 18 13	TS

Check your understanding Questions

Maya says that 2578 x 4 gives the same product as 8 x 1289. Is she correct? Demonstrate why/why not.

If Sally multiplies a number by 12, she gets 9,432. What was her starting number?

Tom multiplies his number by 9 and gets 7074. What was his starting number?

A farmer is packing eggs in boxes of 6.

She has 980 eggs to pack.

- i) How many boxes can the farmer fill using 980 eggs?
- ii) How many boxes will she need to hold all 980 eggs?

Answers on the next page

Check your understanding Answers

Maya says that 2578 x 4 gives the same product as 8 x 1289. Is she correct? Demonstrate why/why not. Maya is correct, the product of each is 10,312. Comparing the two questions, 4 has been doubled and 2578 halved, which produces the same product.

If Sally multiplies a number by 12 she gets 9,432. What was her starting number? 786.

Tom multiplies his number by 9 and gets 7074. What was his starting number? 786.

Solved by division – for some children 'multiplies' is a trigger to do just that, rather than the division (as the reverse of multiplication) needed to solve these.

A farmer is packing eggs in boxes of 6. She has 980 eggs to pack.

i) How many boxes can the farmer fill using 980 eggs? 163.

ii) How many boxes will she need to hold all 980 eggs? 164

Since 980 \div 6 = 163r2 (or $^{2}/_{6}$), the answer to the first problem means rounding down and the second rounding up. A child simply giving 163r2 has solved the division but not answered the problems.