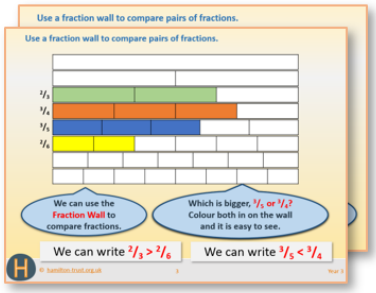
Week 14, Day 2

Use short division, expressing the remainders as fractions.

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

1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



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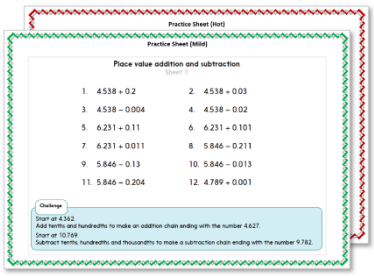
2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
   Check the answers.



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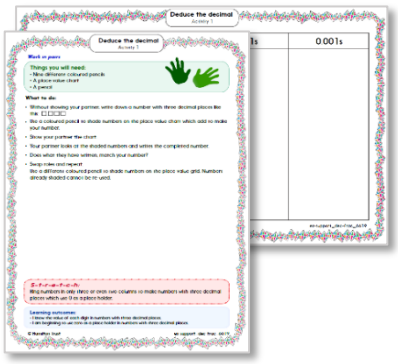
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



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4. Think you've cracked it? Whizzed through the Practice Sheets?
   Have a go at the **Investigation**…

Learning Reminders

Use short division to divide 4-digit numbers by single-digit numbers, expressing the remainders as fractions.

5466 ÷ 4 using short division

Start by dividing 5 by 4.
There is one 4 in 5 and 1 left over.
Write **1** above the line, in the 1000s place.
Write 1 in front of the next digit.

Now divide 14 by 4.
There are three 4s in 14 and 2 left over.
Write **3** above the line, in the 100s place.
Write 2 in front of the next digit.

Now divide 26 by 4.
There are six 4s in 26 and 2 left over.
Write **6** above the line, in the 10s place.
Write 2 in front of the next digit.

Again, there are six 4s in 26.
Write **6** in the 1s place.
There are 2 left over, so write **r 2**.

$$\begin{array}{r} 1366\ r\ 2 \\ \hline 4\,|\,5^{1}4^{2}6^{2}6 \end{array}$$

Learning Reminders

Use short division to divide 4-digit numbers by single-digit numbers, expressing the remainders as fractions.

If we want an exact answer we can divide 2 by 4 to give $^{2}/_{4}$.
We can simplify that to $^{1}/_{2}$.

$$4\overline{)5^{1}4^{2}6^{2}6} \quad 1366\ r\ 2$$

The exact answer is $1366^{1}/_{2}$

Learning Reminders

Use short division to divide 4-digit numbers by single-digit numbers, expressing the remainders as fractions.

1520 ÷ 6 using short division

Start with the 1000s. There are no 6s in 1 so leave a space above the 1 and move on.

Now divide 15 by 6.
There are 2 6s in 15 and 3 left over.
Write 2 above the line, in the 100s place.
Write 3 in front of the next digit.

Now divide 32 by 6.
There are 5 6s in 32 and 2 left over.
Write 5 above the line, in the 10s place.
Write 2 in front of the next digit.

Now divide 20 by 6.
There are 3 6s in 20 and 2 left over.
Write 3 above the line in the 1s place.
There are 2 left over, so write r 2.

$$\begin{array}{r} 2\ 5\ 3\ r\ 2 \\ \hline 6\,|\,1\ 5^{3}2^{2}0 \end{array}$$

Try to write this with a fraction instead of the remainder.

The exact answer!

$253\frac{2}{6}$ or $253\frac{1}{3}$

Practice Sheet Mild

More short division with remainders

1. Calculate:

100 × 3	200 × 3	300 × 3
100 × 4	200 × 4	
100 × 5	200 × 5	

2. Use your answers from above to help you with the following challenges:

452	**731**	**278**	**625**	**927**	**541**	**394**	**847**

a) Choose a number to divide by 3. Your answer must be between 100 and 200.
b) Choose a number to divide by 3. Your answer must be between 200 and 300.
c) Choose a number to divide by 4. Your answer must be between 100 and 200.
d) Choose a different number to divide by 4. Your answer must be between 100 and 200.
e) Choose a number to divide by 5. Your answer must be between 100 and 200.
f) Choose a different number to divide by 5. Your answer must be between 100 and 200.

Challenge

Choose a number from the box that you haven't used yet. Write divisions by 3, 4 and 5 and give a range for the answers.

Practice Sheet Hot

Short division: remainders written as fractions

Calculate the EXACT answers to these divisions. Write any remainders as fractions.

1. 7453 ÷ 3
2. 8342 ÷ 5
3. 2589 ÷ 3
4. 3801 ÷ 7
5. 5124 ÷ 6
6. 3456 ÷ 5
7. 8346 ÷ 4
8. 7621 ÷ 6
9. 2897 ÷ 3
10. 3247 ÷ 4
11. 6532 ÷ 6
12. 5214 ÷ 8