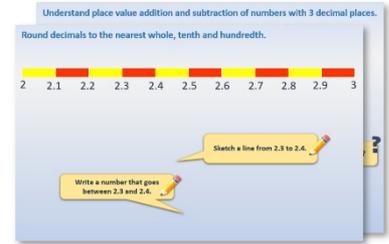


Year 5: Week 3, Day 5

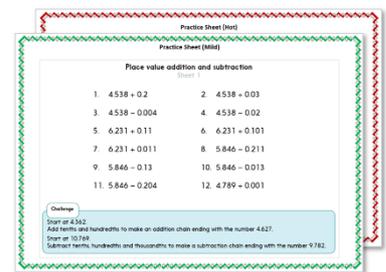
Short division (4-digit numbers)

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

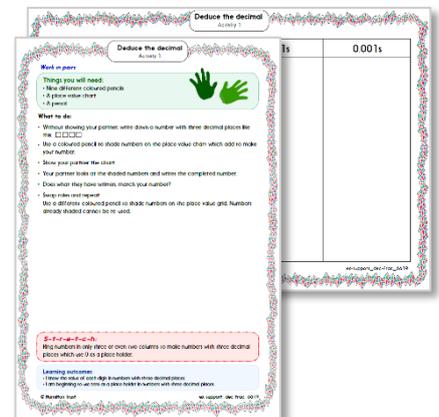
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



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



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



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 1-digit numbers.

$$2537 \div 3$$

$$3 \overline{) 2537}$$

$$3 \overline{) 2 \blacksquare \blacksquare \blacksquare}$$

? How many 3s in 2? None, so move the sticky note.

We are going to move a sticky note along to hide and reveal each column in turn.

Learning Reminders

Use short division to divide 4-digit numbers by 1-digit numbers.

8, and 1 left over.
We write 8 in the 100s column as we are dividing the 100s, then 1 in front of the 10s digit.

$$\begin{array}{r} 8 \\ 3 \overline{) 251} \\ \underline{30} \\ 25 \\ \underline{24} \\ 1 \\ \underline{0} \\ 1 \\ \underline{0} \\ 1 \end{array}$$

?
How many 3s in 25?

Learning Reminders

Use short division to divide 4-digit numbers by 1-digit numbers.

4, and 1 left over.
We write 4 in the 10s column as
we are dividing the 10s, then
one 10 in front of the 1s digit.

$$\begin{array}{r} 84 \\ 3 \overline{) 2513} \end{array}$$

?
How many 3s in 13?

Learning Reminders

Use short division to divide 4-digit numbers by 1-digit numbers.

$$\begin{array}{r} 845 \text{ r } 2 \\ 3 \overline{) 25137} \end{array}$$

5, and 2 left over.
We write 5 in the 1s column.

?
How many 3s in 17?

The exact answer is $845 \frac{2}{3}$.

Practice Sheet Mild

Division problems (4-digits)

Set out and solve these:

1. $3426 \div 3$
2. $4168 \div 4$
3. $6471 \div 5$

Solve these problems:

4. The Headteacher shares 1824 multilink cubes between 4 classes. How many cubes does each class get?
5. 2636 sweets are put into packets of 5. How many packets will there be? How many sweets are left over?
6. 2234 marbles are shared between 3 children. How many does each child get? How many are left over?

Challenge

A woman has £1700 pounds. She wants to give $\frac{1}{2}$ to the cat's home, $\frac{1}{3}$ to the dog's home and $\frac{1}{9}$ to the Woodland Trust.

To the nearest £1, how much money will she have left?

Practice Sheet Hot

Division problems (4-digits)

Set out and solve these:

1. $5133 \div 4$
2. $1249 \div 8$
3. $7412 \div 6$
4. $5268 \div 9$

Solve these word problems:

5. The Headteacher shares 2506 multilink cubes between 7 classes. How many cubes does each class get?
6. 3923 sweets are put into packets of 6. How many packets will there be? How many sweets are left over?
7. 8 friends share a restaurant bill of £93.44. How much should they each pay?
8. 5 tennis rackets cost £94.75. How much does each one cost?

Challenge

A woman has £1700 pounds. She wants to give $\frac{1}{2}$ to the cat's home, $\frac{1}{3}$ to the dog's home and $\frac{1}{9}$ to the Woodland Trust.

To the nearest 10p, how much money will she have left?

Practice Sheet Answers

Division problems (4-digits) (mild)

1. $3426 \div 3 = 1142$
2. $4168 \div 4 = 1042$
3. $6471 \div 5 = 1294 \text{ r}1$
4. 456 cubes
5. 527 packets. One is left over.
6. 744 marbles. Two are left over.

Challenge

$$£1700 \div 2 = £850.00$$

$$£1700 \div 3 = £566.67$$

$$£1700 \div 9 = £188.89$$

£1605.56 donated, which is £1606 to the nearest £1, so she has £94 left

Division problems (4-digits) (hot)

1. $5133 \div 4 = 1283 \text{ r}1$
2. $1249 \div 8 = 156 \text{ r}1$
3. $7412 \div 6 = 1235 \text{ r}2$
4. $5268 \div 9 = 585 \text{ r}3$
5. 358 cubes.
6. 653. Five are left over.
7. £11.68
8. £18.95

Challenge

$$£1700 \div 2 = £850.00$$

$$£1700 \div 3 = £566.67$$

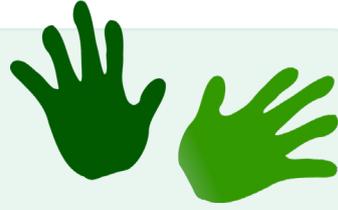
$$£1700 \div 9 = £188.89$$

£1605.56 donated, which is £1605.60 to the nearest 10p,
so she has £94.40 left.

A Bit Stuck? Any left?

Things you will need:

- A pencil



What to do:

- Choose a division to work out - some will give remainders but a few won't!
- Calculate the answer.
- Repeat at least four more times.
- Score 1 point for each correct answer but 10 points for each remainder!

$$637 \div 5$$

$$336 \div 3$$

$$429 \div 4$$

$$545 \div 5$$

$$844 \div 4$$

$$623 \div 3$$

$$448 \div 4$$

$$518 \div 5$$

$$426 \div 3$$

S-t-r-e-t-c-h:

Write two more divisions in the form $\square\square\square \div 5$ that have a remainder.

Learning outcomes:

- I can divide 3-digit numbers with remainders.

Investigation

Division remainder patterns

1. Divide 1262 by 3, 4, 5 and 6.
Record each division and the remainder.
2. Divide 1562 by 3, 4, 5 and 6.
Record each division and the remainder.
3. Divide 1862 by 3, 4, 5 and 6.
Record each division and the remainder.
4. Divide 2162 by 3, 4, 5 and 6.
Record each division, and the remainder.

Invent other divisions of four-digit numbers by 3, 4, 5 and 6 that will give the same type of answers.
Try 1322 and 1622.

Can you explain how you know what digits to choose in your four-digit number?

Is there a rule?

	420 r 2
3	1262
4	1262

Challenge

Think of four-digit numbers which when divided by 3, 4, 5 and 6 give a remainder of 1.