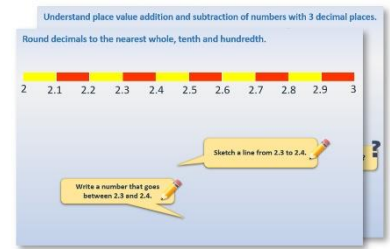


Year 4: Week 2, Day 5

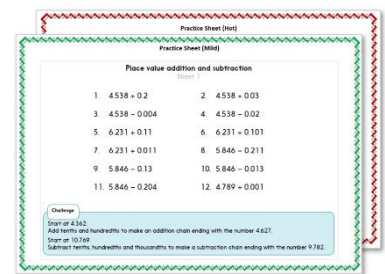
Column subtraction

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

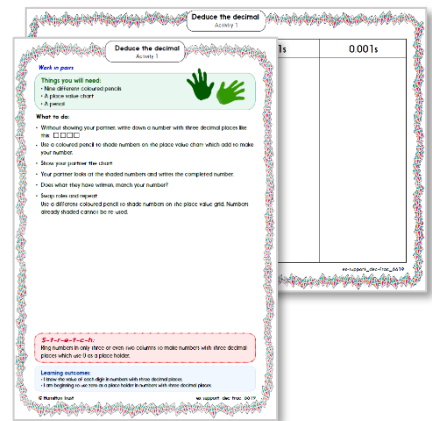
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



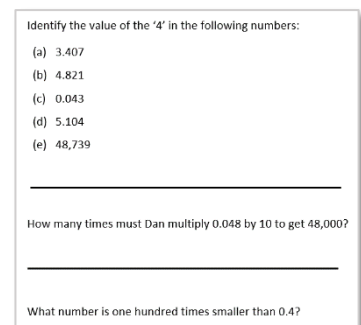
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



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



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



Learning Reminders

Subtract 3-digit numbers using expanded column subtraction.

Let's work out
 $725 - 462$ using
column subtraction.

First **partition** the numbers
and set them out neatly.

Subtract the 1s.
 $5 - 2 = ?$

60 is bigger than 20 so
take 100 from the 700
and add it to the 10s.

Now subtract the 10s.
 $120 - 60 = ?$

Subtract the 100s.
 $600 - 400 = ?$

$$\begin{array}{r} 600 \ 120 \\ \cancel{700} \ \cancel{20} \ 5 \\ - 400 \ 60 \ 2 \\ \hline 200 \ 60 \ 3 \end{array}$$

Finally recombine
200, 60 and 3.

$$725 - 462 = 263$$

Learning Reminders

Subtract 3-digit numbers using expanded column subtraction.



Now let's try **745 - 367**.
How many moves across columns
will we need this time?

7 is bigger than 5 so take
10 from the 40 and add it
to the 1s.

$$15 - 7 = ?$$

60 is bigger than 30 so
take 100 from the 700
and add it to the 10s.

$$130 - 60 = ?$$

Subtract the 100s.
 $600 - 300 = ?$

$$\begin{array}{r} 600 \quad 130 \quad 15 \\ \cancel{700} \quad \cancel{40} \quad \cancel{5} \\ - 300 \quad 60 \quad 7 \\ \hline 300 \quad 70 \quad 8 \end{array}$$

Finally recombine
300, 70 and 8.

$$745 - 367 = 378$$

Practice Sheet Mild

Expanded subtraction

Use expanded column subtraction to solve these calculations.

1. $265 - 134$

2. $598 - 372$

3. $682 - 456$

4. $364 - 149$

5. $472 - 253$

6. $745 - 561$

7. $874 - 246$

8. $855 - 278$

9. $952 - 685$

10. $344 - 175$

11. $535 - 488$

12. $746 - 467$

Challenge

Write a 3-digit number. Subtract it from 999. Now say the answer if you were to subtract it from 1000. Check using Frog to subtract it from 1000.

Repeat with another 3-digit number.

Practice Sheet Hot Subtraction

Choose whether to use counting up (Frog) or expanded column subtraction.

$453 - 348 =$

$958 - 482 =$

$674 - 427 =$

$607 - 572 =$

$826 - 645 =$

$803 - 641 =$

$725 - 532 =$

$520 - 315 =$

$847 - 673 =$

$630 - 527 =$

Practice Sheet Answers

Expanded subtraction (mild)

- | | | | |
|-----|-------------------|-----|-------------------|
| 1. | $265 - 134 = 131$ | 2. | $598 - 372 = 226$ |
| 3. | $682 - 456 = 226$ | 4. | $364 - 149 = 215$ |
| 5. | $472 - 253 = 219$ | 6. | $745 - 561 = 184$ |
| 7. | $874 - 246 = 628$ | 8. | $855 - 278 = 577$ |
| 9. | $952 - 685 = 267$ | 10. | $344 - 175 = 169$ |
| 11. | $535 - 488 = 47$ | 12. | $746 - 467 = 279$ |

Subtraction (hot)

- | | |
|-------------------|-------------------|
| $453 - 348 = 105$ | $958 - 482 = 476$ |
| $674 - 427 = 247$ | $607 - 572 = 35$ |
| $826 - 645 = 181$ | $803 - 641 = 162$ |
| $725 - 532 = 193$ | $520 - 315 = 205$ |
| $847 - 673 = 174$ | $630 - 527 = 103$ |

A Bit Stuck?

Parent or carer

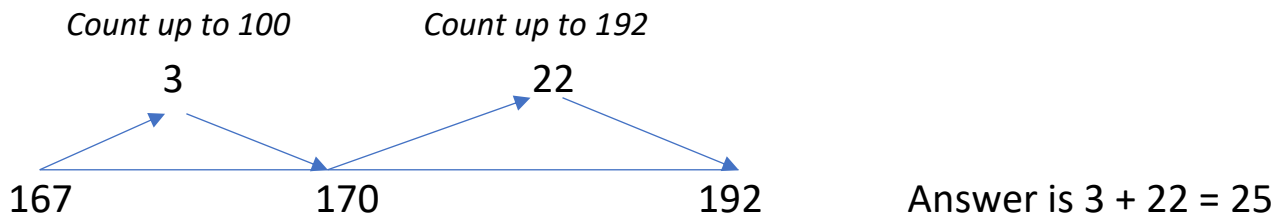
Many children at this age find column subtraction very tricky. In this case, we give them more practice on subtracting using the strategy of **counting up** on a number line. This is the method that we all use when finding our change!

Pay £10 Spend £7.25 Count up from £7.25 to £10



So, help your child to do the calculations below by counting up.

Here's the second one. **192 – 167**



You can do every one on the sheet below like this.

This achieves a lot of good things!

- They rehearse the skill of adding to the next multiple of 10 – an absolutely essential skill for numerical fluency.
- They consolidate their understanding of how numbers work – counting from the multiple of 10 to the next number (This is the second hop.)
- They gain confidence, because you can do ANY subtraction this way
- It is a method which is particularly useful for money calculations.

GOOD LUCK!

A Bit Stuck? Teach the frog

Work in pairs

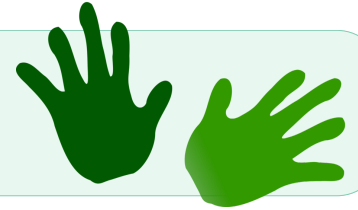
What to do:

Take it in turns to be the teacher and to be the Frog.
Tell your partner, one step at a time, how to work out
the answer to each subtraction.

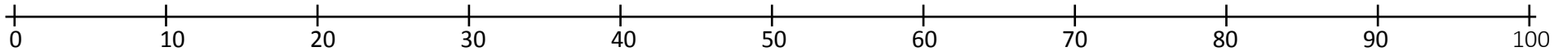
Remember to use your skills in subtracting 2-digit numbers to help you to subtract 3-digit numbers.

Things you will need:

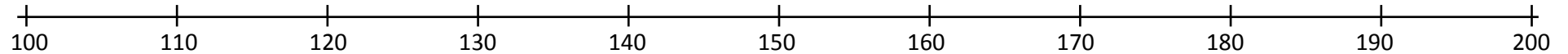
- A pencil



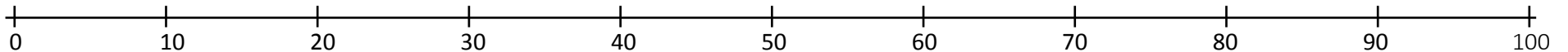
1. $92 - 67 =$



2. $192 - 167 =$



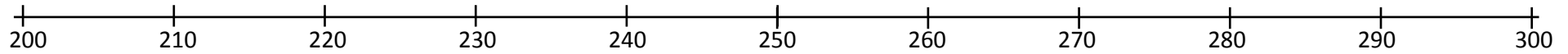
3. $83 - 45 =$



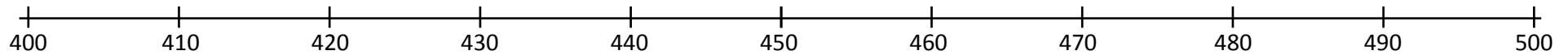
A Bit Stuck?

Teach the frog

4. $283 - 267 =$



5. $452 - 437 =$



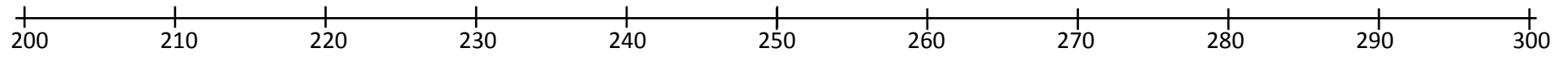
S-t-r-e-t-c-h:

Draw your own number line jottings to work out
 $354 - 337$ and $572 - 549$.

Learning outcomes:

- I can use Frog to subtract pairs of 2-digit numbers, using a landmarked line to help.
- I can use Frog to subtract pairs of 3-digit numbers, within the same century, using a landmarked line to help.
- I am beginning to sketch my own number line jottings when using Frog.

A Bit Stuck?
Teach the frog



Check your understanding

Questions

Complete this calculation that uses 'column subtraction':

$$\begin{array}{r} 700 \ 30 \ 7 \\ - 300 \ 60 \ 5 \\ \hline \end{array}$$

Fill the gaps in this subtraction:

$$81\boxed{} - 4\boxed{}7 = \boxed{}46$$

Fold here to hide answers

Check your understanding

Answers

Complete this calculation that uses 'column subtraction':


$$\begin{array}{r} 600 \ 130 \\ ~~700 \ 307~~ \\ - 300 \ 60 \ 5 \\ \hline 300 \ 70 \ 2 \end{array}$$

Fill the gaps in this subtraction:

$$81\boxed{3} - 4\boxed{6}7 = \boxed{3}46$$

Probably best-solved by setting out as a column subtraction.