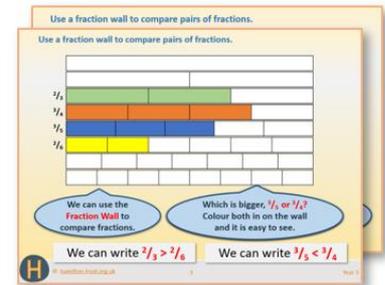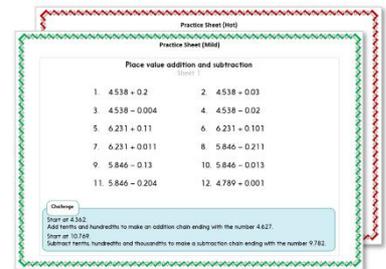# Week 13, Day 2
Mental strategies to add and subtract.
Each day covers one maths topic. It should take you about 1 hour or just a little more.
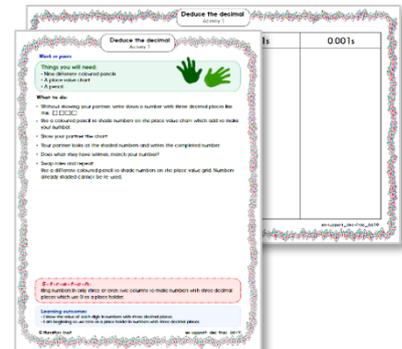
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.

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 pairs to 100, other facts and place value to mentally add and subtract, including decimal numbers and money.

All the calculations today can be worked out *mentally*!
No written column methods are allowed today!
Here are some examples.
Read the clues then try them out!

2.77 − 0.78

Notice that 0.78 is just a little more than 2.77.

23.8 + 0.5

Split 0.5 into 0.2 and 0.3.

£3.65 + £2.35

What do you know about 65 and 35?

Answers

£6
24.3
1.99

Practice Sheet Mild
Mental addition and subtraction

Solve the following mentally:

1. £2.70 + ☐ = £3

2. 6.3 - 0.5 = ☐

3. £1.98 + 32p = ☐

4. 7.9 + 0.8 = ☐

5. ☐ - 1.1 = 6.7

6. 0.45 + ☐ = 1

7. £3.62 + £1.28 = ☐

8. ☐ - 26p = £2.99

Practice Sheet Hot
Mental addition and subtraction

$£2.68 + \boxed{} = £3$

$56{,}278 - 6070$

$12.5 - 0.7$

$6 - \boxed{} = 5.36$

$45.7 + 0.6$

$4.58 + \boxed{} = 5$

$\boxed{} - £2.67 = £2.33$

$6.45 + 0.55$

$43{,}020 + 408$

$£4.36 - 37p$

$\boxed{} + 0.48 = 1$

$\boxed{} + 31p = £5$

$\boxed{} - 0.47 = 0.53$

$3.25 - 0.26$

$£4.78 + 23p$

$£4.65 + £1.35$

$£10 - \boxed{} = £5.01$

Practice Sheets Answers

Mental addition and subtraction (mild)

1. £2.70 + 30p = £3
2. 6.3 - 0.5 = 5.8
3. £1.98 + 32p = £2.30
4. 7.9 + 0.8 = 8.7
5. 7.8 - 1.1 = 6.7
6. 0.45 + 0.55 = 1
7. £3.63 + £1.28 = £4.90
8. £3.25 - 26p = £2.99

Mental addition and subtraction (hot)

£2.68 + 32p = £3   56,278 – 6070 = 50,208

           12.5 – 0.7 = 11.8   6 – 0.64 = 5.36

45.7 + 0.6 = 46.3

           4.58 + 0.42 = 5   £5 – £2.67 = £2.33

6.45 + 0.55 = 7

           43,020 + 408 = 43,428   £4.36 – 37p = £3.99

                                                   0.52 + 0.48 = 1

£4.69 + 31p = £5   1 – 0.47 = 0.53

                                                   3.25 – 0.26 = 2.99

£4.78 + 23p = £5.01   £4.65 + £1.35 = £6   £10 – £4.99 = £5.01

A Bit Stuck?
Pick 'n' mix

What to do:

• Choose a pair of numbers, one from each star, that are easy to add. What is it about the numbers that makes them 'easy' to add?
• Write the addition and calculate the answer.
• Repeat at least two more times.
• Now choose a pair of numbers which are easy to subtract. Work out the answer.
• Repeat at least twice.
• How many additions and subtractions can you work out before time is up?

534   375
647   453

301   220
32   24
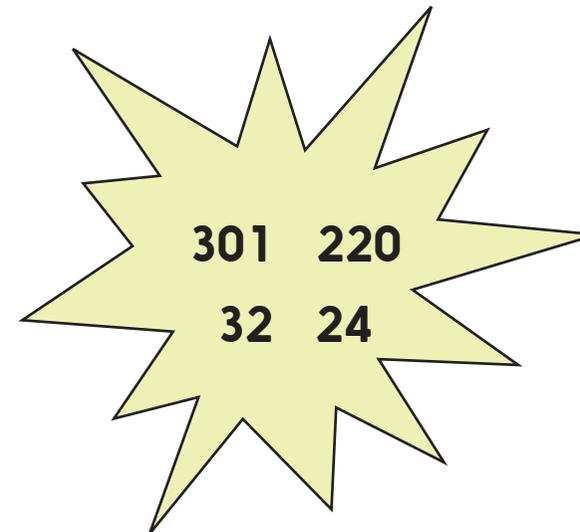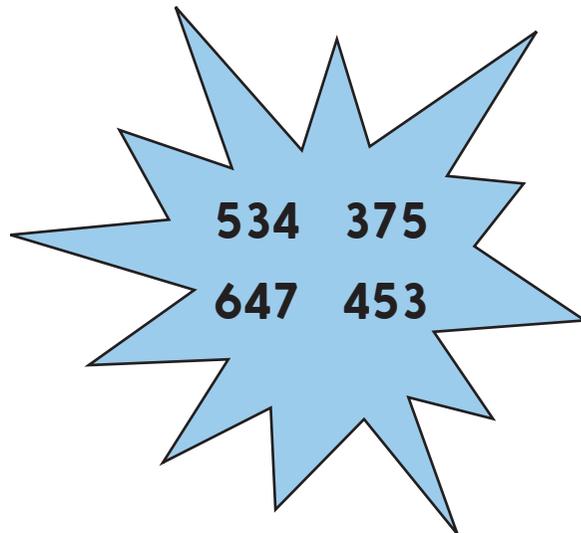
S-t-r-e-t-c-h:
Sort these four additions into those you would work out using a written method and those you would work out mentally:
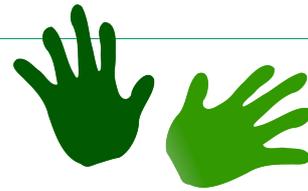635 + 287, 734 + 203, 527 + 310 and 478 + 259.

Learning outcomes:

• I can use place value to add and subtract to/from 3-digit numbers (changing two digits).
• I am beginning to choose mental or written methods.

Investigation
Quick calculations

- To prepare for this challenge cut up and shuffle both sets of 'Mental addition and subtraction cards' (questions **and** answers) then spread them **all** out, face up, on a table.

$$8.27 + \boxed{} = 9$$

$$62.4 - 0.8$$

$$27,345$$

$$\boxed{} - £5.67 = £14.33$$

$$£3.02$$

$$3.62$$

- There are 21 questions!
  Predict how many questions and answers you can match in 5 minutes!

- Using a clock/watch/timer to check, match as many questions and answers as you can in 5 minutes.

- How close was your prediction?

- Repeat. Can you match them all this time, or beat your previous time if you matched them all first time?

- Are there any that you find tricky? Put those aside and see if you can find all of the others in 5 minutes. Think about what strategies help with these questions before trying again with the tricky ones.

Challenge

Write six more of your own questions which use pairs to 100, including £1 (e.g. 27p + 73p) and 1 (e.g. 0.41 + 0.59). Include examples with empty boxes in the first and second positions, e.g.

$$\boxed{} + 27p = £1 \qquad\qquad 1 = 0.41 + \boxed{}$$

Investigation
Mental addition and subtraction cards

$8.27 + \boxed{} = 9$	$45{,}703 - 5003$	$£6.48 + \boxed{} = £10$
$62.4 - 0.8$	$\boxed{} + 0.47 = 1$	$£5 - \boxed{} = £3.79$
$45{,}703 - 5700$	$\boxed{} - 0.46 = 2.54$	$7.34 + \boxed{} = 10$
$£2.75 + 27p$	$£8.35 - 37p$	$£10 - \boxed{} = £5.31$
$20{,}305 + 7040$	$23.6 + 0.7$	$3.7 + \boxed{} = 4.3$
$\boxed{} - £5.67 = £14.33$	$\boxed{} + 0.38 = 4$	$2.78 + 0.23$
$8.54 - 0.55$	$43{,}241 + 20{,}005$	$34{,}030 + \boxed{} = 34{,}738$

Investigation
Mental addition and subtraction cards

2.66	3.62	24.3
0.6	0.73	0.53
£7.98	27,345	7.99
40,700	£20	£3.52
63,246	40,003	708
61.6	3	£1.21
£3.02	£4.69	3.01