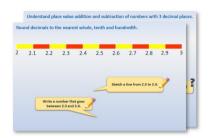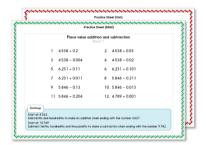# Week 13, Day 3
Add three or four 2-digit numbers

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
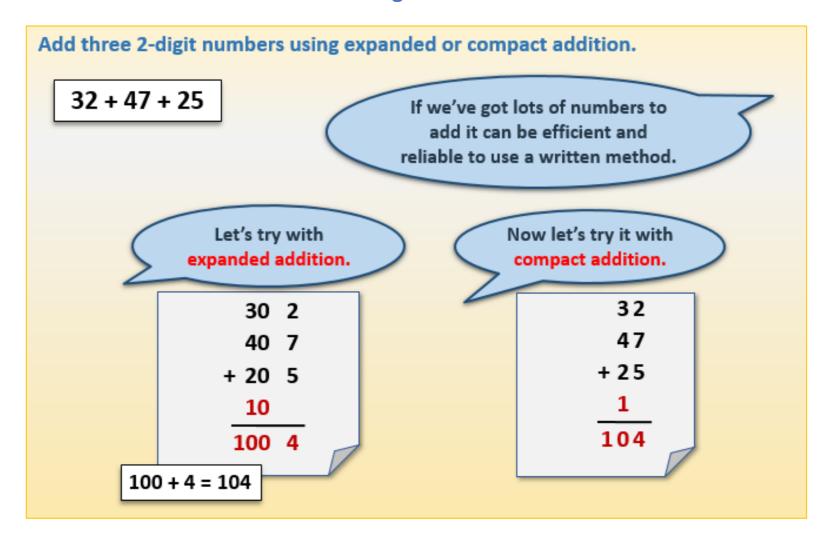   Hot (harder)!
   Check the answers.

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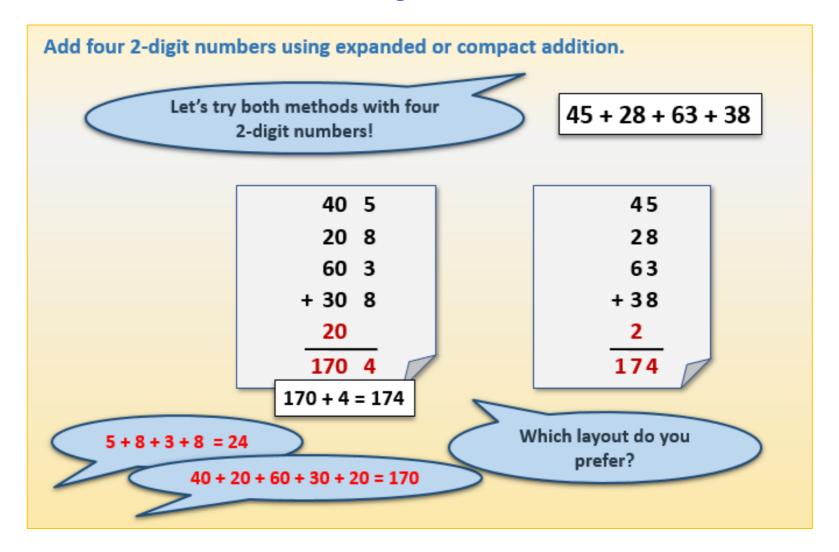   grown-up at **A Bit Stuck?**

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

Learning Reminders

Add three 2-digit numbers using expanded or compact addition.

$32 + 47 + 25$

If we've got lots of numbers to add it can be efficient and reliable to use a written method.

Let's try with **expanded addition.**

```
 30  2
 40  7
+20  5
 10
─────
100  4
```

$100 + 4 = 104$

Now let's try it with **compact addition.**

```
  32
  47
+ 25
   1
────
 104
```

Learning Reminders

Practice Sheet Mild
Adding three and four 2-digit numbers

1. 42 + 30 + 25

2. 53 + 32 + 43

3. 34 + 25 + 32

4. 63 + 42 + 34

5. 52 + 27 + 36

6. 48 + 24 + 32

7. 36 + 28 + 19

8. 43 + 27 + 26

9. 28 + 39 + 27

10. 56 + 37 + 48

Practice Sheet Hot
Adding three and four 2-digit numbers

1. 74 + 56 + 36

2. 85 + 47 + 38

3. 42 + 34 + 14 + 35

4. 37 + 25 + 18 + 23

5. 45 + 24 + 50 + 34

6. 72 + 84 + 51 + 92

7. 78 + 89 + 58 + 67

8. 84 + 47 + 65 + 36

9. 58 + 73 + 87 + 45

10. 88 + 77 + 66 + 55

Practice Sheet Answers

Practice Sheet (Mild)
1. 42 + 30 + 25 = 97
2. 53 + 32 + 43 = 128
3. 34 + 25 + 32 = 91
4. 63 + 42 + 34 = 139
5. 52 + 27 + 36 = 115
6. 48 + 24 + 32 = 104
7. 36 + 28 + 19 = 83
8. 43 + 27 + 26 = 96
9. 28 + 39 + 27 = 94
10. 56 + 37 + 48 = 141

Practice Sheet (Hot)

1. 74 + 56 + 36 = 166
2. 85 + 47 + 38 = 170
3. 42 + 34 + 14 + 35 = 125
4. 37 + 25 + 18 + 23 = 103
5. 45 + 24 + 50 + 34 = 153
6. 72 + 84 + 51 + 92 = 299
7. 78 + 89 + 58 + 67 = 292
8. 84 + 47 + 65 + 36 = 232
9. 58 + 73 + 87 + 45 = 263
10. 88 + 77 + 66 + 55 = 286

21   82   14   93   61

45   42   73   27   24

48   26   17   33   38

Choose three numbers which you think will have a total of 100.

Add the tens.

Add the ones.

Add the total.

Look for another three. Repeat.

Can you get closer to 100?

Try at least six sets of three numbers. What is the closest you can get?

Example

48 + 45 + 21

40 + 40 + 20 = 100

8 + 5 + 1 = 14

So, total = 114

Investigation
Super Sevens

- Your task is to add strings of 2-digit numbers, with the challenge of finding answers containing as many 7s as possible.

- Let's be systematic and begin by adding just two 2-digit numbers...
  What is the maximum number of 7s you can have in your answer?

- Did you find any answers that were all 7s - there are **lots** of ways to make a total of 77...! Were there any patterns or rules you relied on?
  Can you write a sentence or two to explain any strategy you used...?

- Now you've got the hang of it, what about adding three 2-digit numbers, again aiming to find answers containing as many 7s as possible.
  If you used a rule before to find 77s, does the same rule work with three 2-digit numbers, or will you need to do something different?

```
   5 0
   2 0
 + 4 7
   1
 1 1 7
```

Well, there's one 7 in this answer... Can you do better than this?

- Write down any observations you have, or patterns you find when trying to find your super sevens!