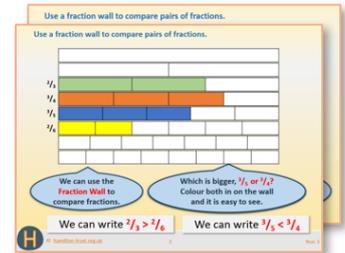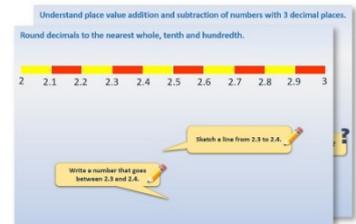# Week 13, Day 1
Written addition (1)

Each day covers one maths topic. It should take you about 1 hour or just a little more.
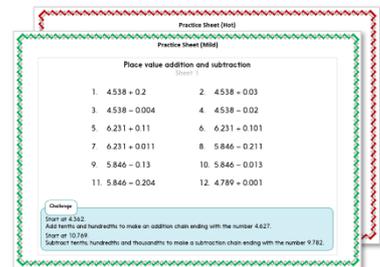
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.
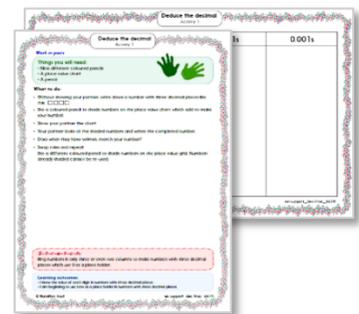
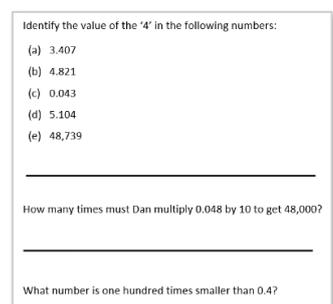   OR start by carefully reading through the **Learning Reminders**.

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

Revise using expanded and compact addition to add any pair of 3-digit numbers.

654 + 567

Today we are going to revise the **expanded** *or* **compact** *layouts for adding 3-digit numbers.*

First let's use **expanded addition.**

First *partition the numbers and set them out neatly, leaving a space, then a line for the answer.*

```
  600  50  4
+ 500  60  7
  100  10
 ─────────────
 1200  20  1
```

1200 + 20 + 1 = 1221

4 + 7 = 11. *Put 1 in the answer line and 10 in the waiting line.*

50 + 60 + 10 = 120. *Put 20 in the answer line and 100 in the waiting line.*

600 + 500 + 100 = 1200. *Put 1200 in the answer line and then recombine 1200, 20 and 1.*

Learning Reminders

Revise using expanded and compact addition to add any pair of 3-digit numbers.

654 + 567

Now let's check with the **compact method.**

Set the numbers out neatly, leaving a space, then a line for the answer.

Add the 1s. Put 1 in the answer line under the 1s and 1 in 10s column in the waiting line.

Add the 10s. Put 2 in the answer line under the 10s and 1 in 100s in the waiting line.

Add the 100s. Put 1 and 2 under the 1000s and 100s in the answer line.

```
   654
 + 567
    11
 ─────
  1221
```

Learning Reminders

Revise using expanded and compact addition to add any pair of 3-digit numbers.

Let's compare workings. What do you like about each layout?

The place value is exposed in the first which helps us to make sense of the numbers we are using, but the second takes up less space and is quicker to write down.

```
   600  50  4
 + 500  60  7
   100  10
 ─────────────
  1200  20  1
```

1200 + 20 + 1 = 1221

```
   654
 + 567
    11
 ──────
  1221
```

But importantly, both give us the correct answer!

Learning Reminders

Revise using expanded and compact addition to add any pair of 3-digit numbers.

478 + 245 and 837 + 367

Try these using your preferred layout.

Here's 478 + 245 using expanded addition.

```
  400  70  8
+ 200  40  5
  100  10
  ───────────
  700  20  3
```

700 + 20 + 3 = 723

Here's 837 + 367 using compact addition.

```
   837
 + 367
    11
  ──────
  1204
```

Practice Sheet Mild
Adding two 3-digit numbers

1. 478 + 308

2. 540 + 427

3. 447 + 236

4. 683 + 234

5. 761 + 152

6. 572 + 334

7. 478 + 284

8. 363 + 249

9. 558 + 375

10. 608 + 297

11. 546 + 374

12. 379 + 426

Practice Sheet Hot
Adding two 3-digit numbers

1. 478 + 284

2. 363 + 249

3. 558 + 375

4. 608 + 297

5. 546 + 374

6. 379 + 426

7. 876 + 572

8. 738 + 427

9. 886 + 485

10. 945 + 478

11. 846 + 354

12. 675 + 486

Practice Sheet Answers

Practice Sheet (Mild)

1. 478 + 308 = 786
2. 540 + 427 = 967
3. 447 + 236 = 683
4. 683 + 234 = 917
5. 761 + 152 = 913
6. 572 + 334 = 906
7. 478 + 284 = 762
8. 363 + 249 = 612
9. 558 + 375 = 933
10. 608 + 297 = 905
11. 546 + 374 = 920
12. 379 + 426 = 805

Practice Sheet (Hot)

1. 478 + 284 = 762
2. 363 + 249 = 612
3. 558 + 375 = 933
4. 608 + 297 = 905
5. 546 + 374 = 920
6. 379 + 426 = 805
7. 876 + 572 = 1448
8. 738 + 427 = 1165
9. 886 + 485 = 1371
10. 945 + 478 = 1423
11. 846 + 354 = 1200
12. 675 + 486 = 1161

Work in pairs

Things you will need:
• A set of 10s and 1s place value cards

What to do:

• Shuffle the 10 to 50 cards.
  Place them face down.

• Shuffle the 1s cards and place face down.

• Each take the top card from each pile
  and put them together to make a 2-digit
  number.

3 4   **2 7**

34 + 27 =

50   +   11 = 61

• Record the addition of your two numbers
  – not the answer yet!

• One person collects the 10s cards, and the
  other collects the 1s cards.

• Add the 10s. Add the 1s.
  Find the combined total.

• Record the addition in your books.

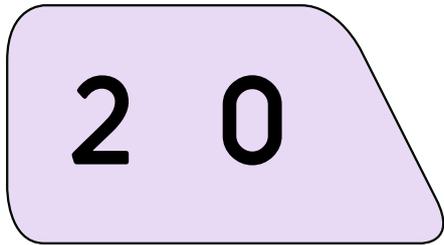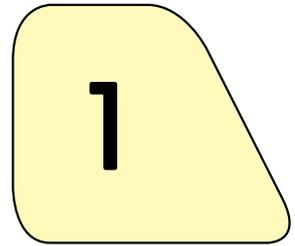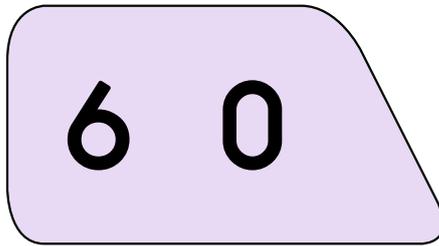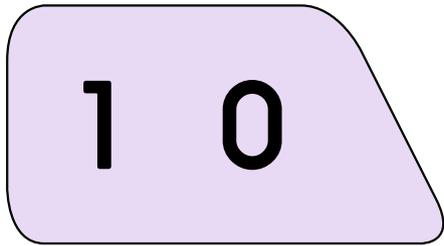• Repeat at least four more times.

S-t-r-e-t-c-h:
Shuffle ALL the 10s cards not just 10 to 50. Use them all!

Learning outcomes:
• I can partition 2-digit numbers.
• I can add two 2-digit numbers using partitioning (total less than 100).
• I am beginning to add two 2-digit numbers using partitioning (total more than 100).
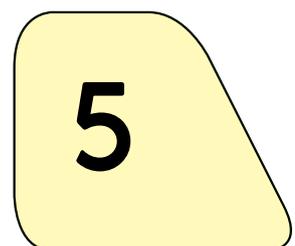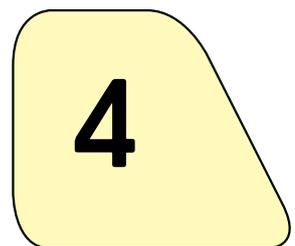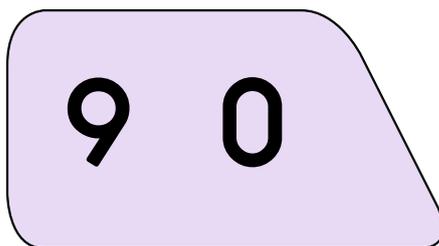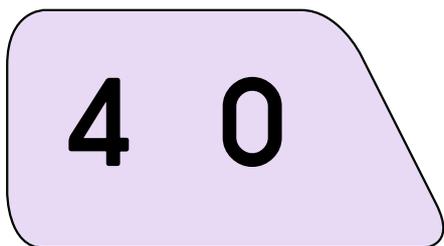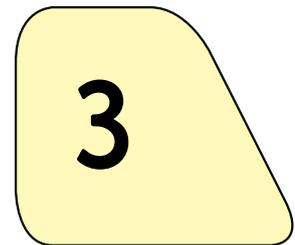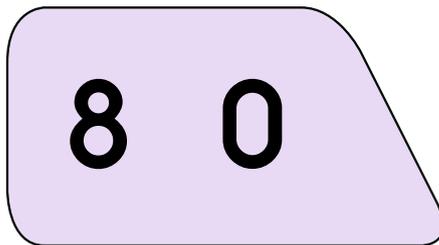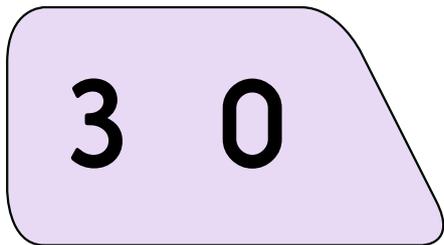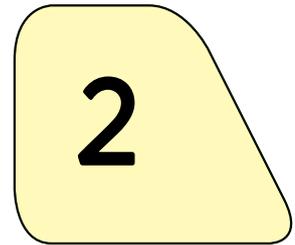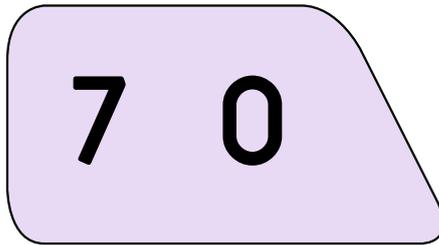
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1 0	6 0	1
2 0	7 0	2
3 0	8 0	3
4 0	9 0	4
5 0		5

6

7

8

9

Check your understanding:
Questions

Choose a different strategy to solve each addition:

1. 375 + 567 =

2. 638 + 51 =

3. 24 + 36 + 25 =

Use column addition to help you to find each missing number:

548 + 175 = ☐

☐ - 356 = 387

635 + 296 = ☐

☐ - 466 = 247

Fold here to hide answers:

Check your understanding:
Answers

Choose a different strategy to solve each addition:

1. 375 + 567 = 942 (Compact or expanded column addition).

2. 638 + 51 = 689 (Add 50 and adjust as 51 is a near multiple).

3. 24 + 36 + 25 = 85 (Spotting the near double or adding the first two mentally using number facts, then the third).

Use column addition to help you to find each missing number:

548 + 175 = 723

743 - 356 = 387

635 + 296 = 931

713 - 466 = 247

For the second and fourth questions, do children realise subtraction and addition are inverse? Other errors are usually due to mistakes in adding 1-digit numbers, not setting out neatly in columns, forgetting to add 'carried' digits.