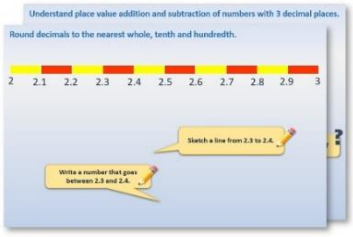
Week 15, Day 2

Add lots of numbers with different numbers of digits

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.



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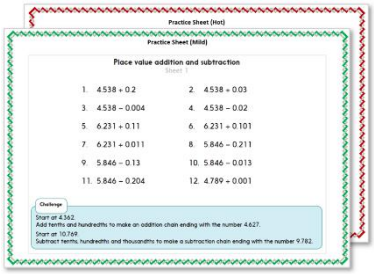
2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
   Check the answers.



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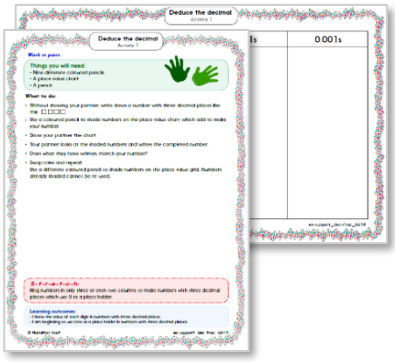
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



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

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Learning Reminders

Add three, four and five numbers including those with different numbers of digits.

Adding 4567 + 24 + 236

```
  4 5 6 7
    2 4
+ 2 3 6
  1 1
  9 3 2 7
```

There's something **wrong** here!

4567 + 24 + 236 can't be more than 9000 as we are only adding 100s and 10s on to 4567.
Closer to 5000 is a better estimate.

Try setting out 4567 + 24 + 236 and solving it before checking on the next page.

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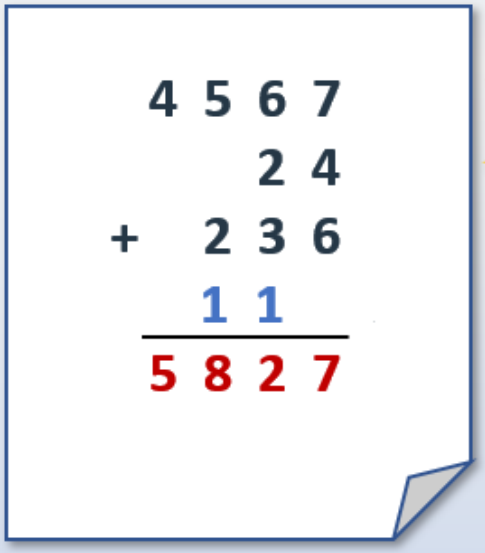
Learning Reminders

Add three, four and five numbers including those with different numbers of digits.

Adding 4567 + 24 + 236



That's better!

The 1s and 10s digits of each number are all lined up correctly.

Add the 1s, then 10s, then 100s, then 1000s.
Remember to use the 'waiting line' for any digits moved between columns.

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Practice Sheet Mild

Adding 'towers' of numbers

1. 54 + 37 + 28 + 46
2. 548 + 24 + 36
3. 274 + 145 + 78
4. 346 + 214 + 257
5. 537 + 138 + 67 + 83
6. 4521 + 35 + 82
7. 548 + 278 + 325 + 426
8. 3471 + 1824 + 2347

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Practice Sheet Hot

Adding 'towers' of numbers

1. 537 + 138 + 67 + 83
2. 4521 + 35 + 82
3. 548 + 278 + 325 + 426
4. 3471 + 1824 + 2347
5. 4721 + 5321 + 378 + 753
6. 8461 + 374 + 68 + 94
7. 78 + 93 + 45 + 62 + 48
8. 745 + 428 + 328 + 38 + 75
9. 4782 + 871 + 372 + 58 + 82
10. 5479 + 2781 + 3781 + 651 + 238

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Practice Sheets Answers

Adding 'towers' of numbers (mild)

1. 54 + 37 + 28 + 46 = 165
2. 548 + 24 + 36 = 608
3. 274 + 145 + 78 = 497
4. 346 + 214 + 257 = 817
5. 537 + 138 + 67 + 83 = 825
6. 4521 + 35 + 82 = 4638
7. 548 + 278 + 325 + 426 = 1577
8. 3471 + 1824 + 2347 = 7642

Adding 'towers' of numbers (hot)

1. 537 + 138 + 67 + 83 = 825
2. 4521 + 35 + 82 = 4638
3. 548 + 278 + 325 + 426 = 1577
4. 3471 + 1824 + 2347 = 7642
5. 4721 + 5321 + 378 + 753 = 11,173
6. 8461 + 374 + 68 + 94 = 8997
7. 78 + 93 + 45 + 62 + 48 = 326
8. 745 + 428 + 328 + 38 + 75 = 1614
9. 4782 + 871 + 372 + 58 + 82 = 6165
10. 5479 + 2781 + 3781 + 651 + 238 = 12,930

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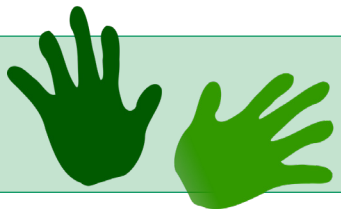
A Bit Stuck?
Super 7000

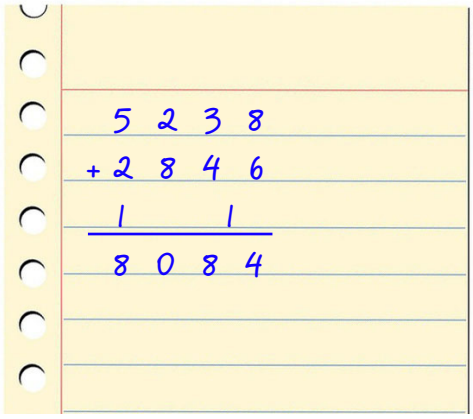
Work in pairs

Things you will need:
- A pencil



What to do:

- Choose a pair of numbers to add using column addition.
- Work together to find numbers with totals close to 7000. Use Frog or place value to find out how far your answer is from 7000.
- How close can you get?



5238 + 2846	4278 + 2185	3825 + 3647	4395 + 3468
4863 + 2372	3275 + 3395	5536 + 1517	4784 + 3539

S-t-r-e-t-c-h:
Can you find your own pairs of numbers with a total of <u>exactly</u> 7000?
No zeros allowed in your pair of numbers!

Learning outcomes:
- I can use column addition (expanded or compact) to add pairs of four-digit numbers (one or two 'carries').
- I am beginning to use column addition (expanded or compact) to add pairs of four-digit numbers (three 'carries', answers less than 10,000).
- I am beginning to estimate totals of 4-digit numbers.

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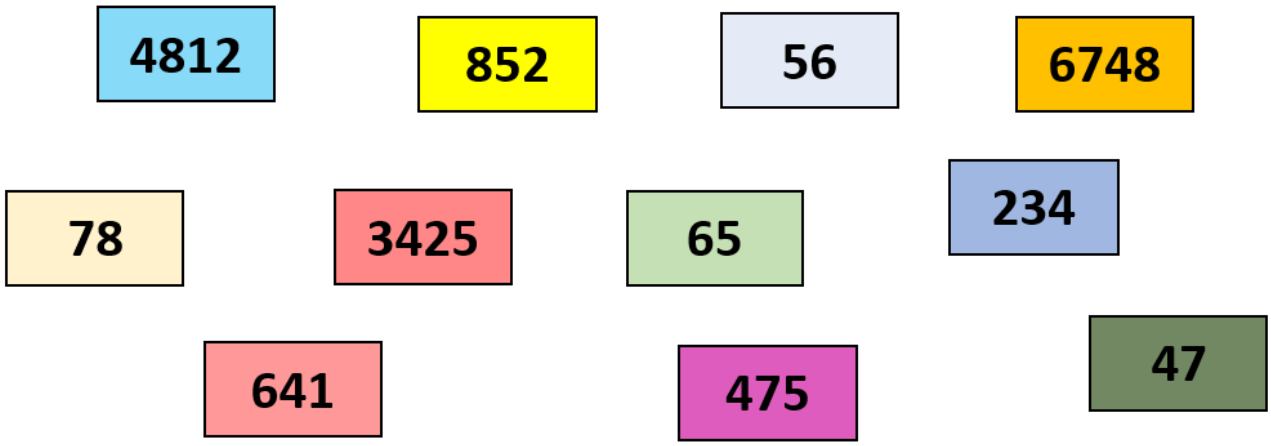
Investigation

Adding Towers



Challenge 1

Find three or four numbers with totals in the following ranges:

<200

500 to 1000

1000 to 2000

4000 to 5000

8000 to 9000

Look carefully at the numbers and estimate your answers before setting out carefully in columns to add.

Challenge 2

Find four or five numbers, aiming to find a total with an answer in each of the following ranges:

10,000 to 12,000

>12,000

Champion Adders Challenge!

Find the total of all 10 numbers.

Hint!

Rather than one big tower of 10 numbers you can add the numbers in groups of 3 or 4 numbers, then find the 'total of the totals'...

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