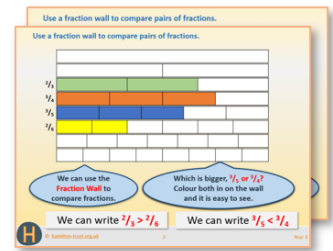


Year 5: Week 4, Day 1

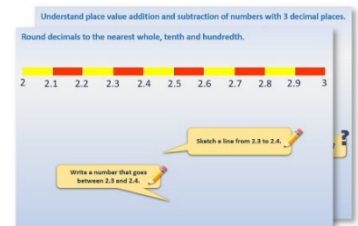
Column addition of 4-digit and 5-digit numbers

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

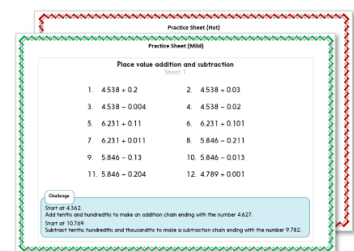
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



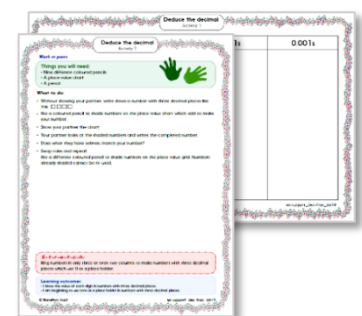
OR start by carefully reading through the **Learning Reminders**.



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

Learning Reminders

Revise column addition of 4-digit and 5-digit numbers.

$$4267 + 2784 + 3832$$

$$8723 + 5265$$

$$23,451 + 18,325$$

$$67,342 + 8352$$



Which do you think will have the biggest answer and the smallest answer?

What were your strategies for estimating these answers?



Rounding numbers to the nearest 1000 is helpful.

$$4000 + 3000 + 4000 = 11,000$$

$$9000 + 5000 = 14,000$$

$$23,000 + 18,000 = 41,000$$

$$67,000 + 8000 = 75,000$$

Learning Reminders

Revise column addition of 4-digit and 5-digit numbers.

$$4267 + 2784 + 3832$$

$$8723 + 5265$$

$$23,451 + 18,325$$

$$67,342 + 8,352$$

Remember to leave a blank row above the answer line.

$$\begin{array}{r} 4267 \\ 2784 \\ + 3832 \\ \hline 111 \\ 10883 \end{array}$$

Add the 1s, then the 10s, then the 100s, then the 1000s.

This is very similar to adding a pair of 4-digit numbers; not harder, just longer - we just have more digits to add.

Learning Reminders

Revise column addition of 4-digit and 5-digit numbers.

$$4267 + 2784 + 3832$$

$$8723 + 5265$$

$$23,451 + 18,325$$

$$67,342 + 8,352$$

Remember to leave a blank row above the answer line.

$$\begin{array}{r} 67342 \\ + 8352 \\ \hline 1 \\ 75694 \end{array}$$

It's really important to align the numbers to the right, according to their place value.

Practice Sheet Mild

Column addition

Look down the additions.

Decide which will have the largest answer. Make a note of it.

Decide which will have the smallest answer. Make a note of it.

Now find each total. Watch out! They do not all need column addition!

1. $4678 + 2372 + 1352$

2. $5234 + 6024 + 3528$

3. $43,271 + 28,345$

4. $32,846 + 24,758$

5. $63,278 + 6831$

6. $45,734 + 9999$

Practice Sheet Hot

Column addition

Look down the additions.

Decide which will have the largest answer. Make a note of it.

Decide which will have the smallest answer. Make a note of it.

Now find each total. Watch out! They do not all need column addition!

1. $4583 + 45,274$
2. $8572 + 4782 + 5837$
3. $6934 + 5047 + 8739$
4. $86,489 + 76,431$
5. $92,371 + 30,004$
6. $45,273 + 23,542 + 13,258$
7. $45,624 + 57,432 + 9467$
8. $5632 + 3789 + 2745 + 3846$

Practice Sheet Answers

Column addition (mild)

1. $4678 + 2372 + 1352 = 8402$
2. $5234 + 6024 + 3528 = 14,786$
3. $43,271 + 28,345 = 71,616$
4. $32,846 + 24,758 = 57,604$
5. $63,278 + 6831 = 70,109$
6. $45,734 + 9999 = 55,733$

Column addition (hot)

1. $4583 + 45,274 = 49,857$
2. $8572 + 4782 + 5837 = 19,191$
3. $6934 + 5047 + 8739 = 20,720$
4. $86,489 + 76,431 = 162,920$
5. $92,371 + 30,004 = 122,375$
6. $45,273 + 23,542 + 13,258 = 82,073$
7. $45,624 + 57,432 + 9467 = 112,523$
8. $5632 + 3789 + 2745 + 3846 = 16,012$

A Bit Stuck?

Super scores

Work in pairs

Things you will need:

- A pencil



What to do:

- Use column addition to work out Jimmy's total score.
- Look at the other children's scores.
Who do you think had the highest total score?
Who do you think had the lowest total score?
- Work as a pair to work out all the total scores to see if you are right.

$$\begin{array}{r} 4238 \\ + 2146 \\ \hline 6384 \end{array}$$

GAME 1
Jimmy 2348

GAME 2
Jimmy 1217

GAME 1
Katya 3821

GAME 2
Katya 2443

GAME 1
Sunny 5372

GAME 2
Sunny 3164

GAME 1
Scott 3427

GAME 2
Scott 3281

GAME 1
Sharon 6239

GAME 2
Sharon 1324

GAME 1
Sandip 3945

GAME 2
Sandip 2832

GAME 1
Abbie 4382

GAME 2
Abbie 2714

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

Write an addition of a pair of 4-digit numbers where the answer is between 8000 and 9000.

Write an addition where the answer is between 3000 and 4000.

Learning outcomes:

- I can use column addition (expanded or compact) to add pairs of four-digit numbers where the 1s are greater than 10, or the 10s are greater than 100 or the 100s are greater than 100.
- I am beginning to estimate total of 4-digit numbers.

Investigation

Triple Trouble

Write any addition of three 4-digit numbers where the answer is between 28,550 and 28,650.

Can you find solutions:

- that use all digits 0 to 9 at least once;
- where no digit 0 to 9 is used more than twice;
- that use the same number three times...?

What is your strategy for getting into the problem?

Are you using any number patterns to help?

Can you write an explanation of what you did?