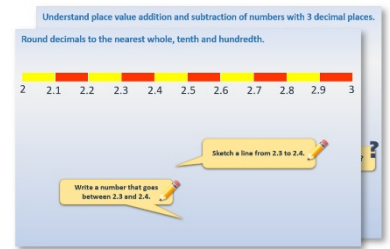


Week 8, Day 2

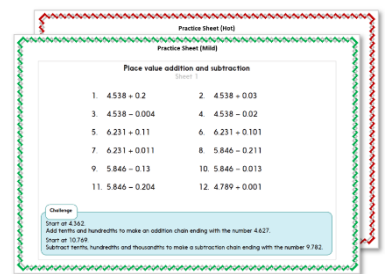
Written addition (2)

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

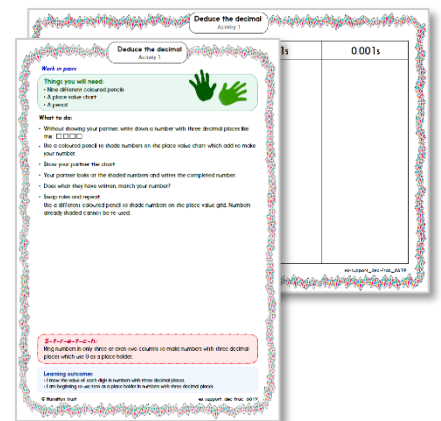
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



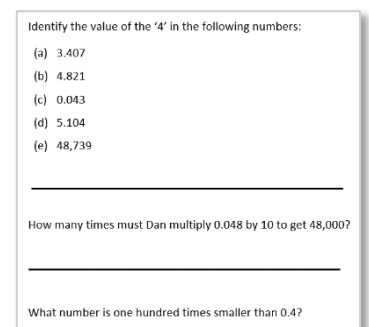
2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



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



4. Have I mastered the topic? A few questions to **Check your understanding**. Fold the page to hide the answers!



Learning Reminders

Use expanded addition to add two 3-digit numbers.

$$\begin{array}{r} 700 \ 20 \ 8 \\ + \ 100 \ 50 \ 3 \\ \hline 800 \ 80 \ 1 \end{array}$$

$$800 + 80 + 1 = 881$$

Let's try $728 + 153$.



1. **Partition** the numbers and line them up neatly. Don't forget a **blank space** under the second number.

2. **Add the 1s.** $8 + 3 = 11$.
The 1s come to more than 10 so we write 10 under the 10s in the **waiting line** and 1 under the 1s in the **answer line**.

3. **Next add the 10s...**
 $20 + 50 + 10 = ?$

4. **Lastly the 100s...**
 $700 + 100 = ?$

5. Finally **recombine** 800, 80 and 1.

Learning Reminders

Use expanded addition to add two 3-digit numbers.

$$\begin{array}{r} 300 \ 70 \ 8 \\ + 200 \ 60 \ 1 \\ \hline 600 \ 30 \ 9 \end{array}$$

$600 + 30 + 9 = 639$

Now let's try $378 + 261$. 

Set it out neatly!

Add the 1s, 10s and 100s and recombine.

What happened when we added the 10s?

Learning Reminders

Use expanded addition to add two 3-digit numbers.

$$\begin{array}{r} 500 \ 60 \ 7 \\ + 100 \ 50 \ 8 \\ \hline 100 \ 10 \\ \hline 700 \ 20 \ 5 \end{array}$$

$$700 + 20 + 5 = 725$$

Now let's try $567 + 158$. 

Set it out neatly!

Add the 1s, 10s and 100s and recombine.

This time the 1s add to more than 10 AND the 10s add to more than 100.

Practice Sheet Mild

Adding two 3-digit numbers

Example: 482 + 286

$$\begin{array}{r}
 400 \quad 80 \quad 2 \\
 + 200 \quad 80 \quad 6 \\
 \hline
 100 \\
 700 \quad 60 \quad 8 \\
 = 768
 \end{array}$$

Part A

a. 328 + 271

$$\begin{array}{r}
 300 \quad 20 \quad 8 \\
 + 200 \quad 70 \quad 1 \\
 \hline
 \end{array}$$

b. 732 + 245

$$\begin{array}{r}
 700 \quad 30 \quad 2 \\
 + 200 \quad 40 \quad 5 \\
 \hline
 \end{array}$$

c. 345 + 335

$$\begin{array}{r}
 300 \quad 40 \quad 5 \\
 + 300 \quad 30 \quad 5 \\
 \hline
 \end{array}$$

d. 166 + 523

$$\begin{array}{r}
 100 \quad 60 \quad 6 \\
 + 500 \quad 20 \quad 3 \\
 \hline
 \end{array}$$

e. 287 + 642

$$\begin{array}{r}
 200 \quad 80 \quad 7 \\
 + 600 \quad 40 \quad 2 \\
 \hline
 \end{array}$$

f. 749 + 244

$$\begin{array}{r}
 700 \quad 40 \quad 9 \\
 + 200 \quad 40 \quad 4 \\
 \hline
 \end{array}$$

Part B

a. 328 + 258

$$\begin{array}{r}
 300 \quad 20 \quad 8 \\
 + 200 \quad 50 \quad 8 \\
 \hline
 \end{array}$$

b. 258 + 535

$$\begin{array}{r}
 200 \quad 50 \quad 8 \\
 + 500 \quad 30 \quad 5 \\
 \hline
 \end{array}$$

c. 586 + 352

$$\begin{array}{r}
 500 \quad 80 \quad 6 \\
 + 300 \quad 50 \quad 2 \\
 \hline
 \end{array}$$

d. 377 + 362

$$\begin{array}{r}
 300 \quad 70 \quad 7 \\
 + 300 \quad 60 \quad 2 \\
 \hline
 \end{array}$$

Practice Sheet Hot

Adding two 3-digit numbers

Part A

a. $146 + 845$

b. $263 + 754$

c. $578 + 206$

d. $836 + 125$

Part B

Example: $485 + 286$

400	80	5
+ 200	80	6
100	10	
<hr/>		
700	70	1
= 771		

a. $385 + 247$

b. $257 + 575$

c. $629 + 352$

d. $387 + 327$

e. $146 + 875$

f. $294 + 736$

g. $778 + 246$

h. $876 + 176$

Practice Sheet Answers

Adding two 3-digit numbers (mild)

Part A

- a. $328 + 271 = 599$
- b. $732 + 245 = 977$
- c. $345 + 335 = 680$
- d. $166 + 523 = 689$
- e. $287 + 642 = 929$
- f. $749 + 244 = 993$

Part B

- a. $328 + 258 = 586$
- b. $258 + 535 = 793$
- c. $586 + 352 = 938$
- d. $377 + 362 = 739$

Adding two 3-digit numbers (hot)

Part A

- a. $146 + 845 = 991$
- b. $263 + 754 = 1017$
- c. $578 + 206 = 784$
- d. $836 + 125 = 961$

Part B

- a. $385 + 247 = 632$
- b. $257 + 575 = 832$
- c. $629 + 352 = 981$
- d. $387 + 327 = 714$
- e. $146 + 875 = 1021$
- f. $294 + 736 = 1030$
- g. $778 + 246 = 1024$
- h. $876 + 176 = 1052$

A Bit Stuck?

Awesome adders

Work in pairs

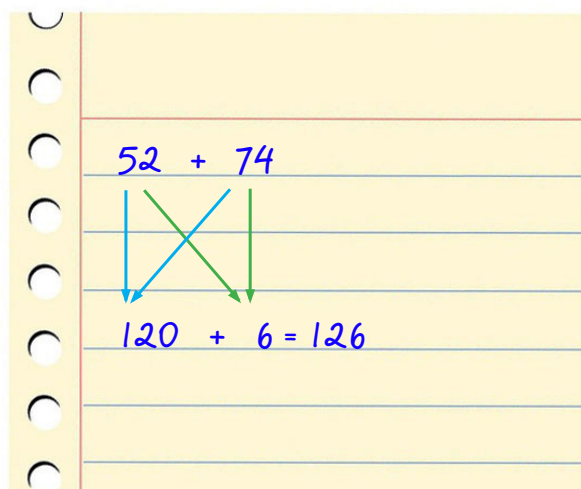
Things you will need:

- A set of 10s and 1s place value cards
- A pencil



What to do:

- Spread the 10 to 90 cards out face up on the table.
Spread the 1 to 9 cards out face up on the table.
- Choose a card from each group and put them together to make a 2-digit number.
- Choose another card from each group to make another 2-digit number.
- One person collects the 10s.
The other person collects the 1s.
How much do you have each?
Now add your totals.
- Record the addition.
- Repeat at least four more times.
- You score 10 points for correct answer less than 100 and 20 points for each correct answer more than 100.

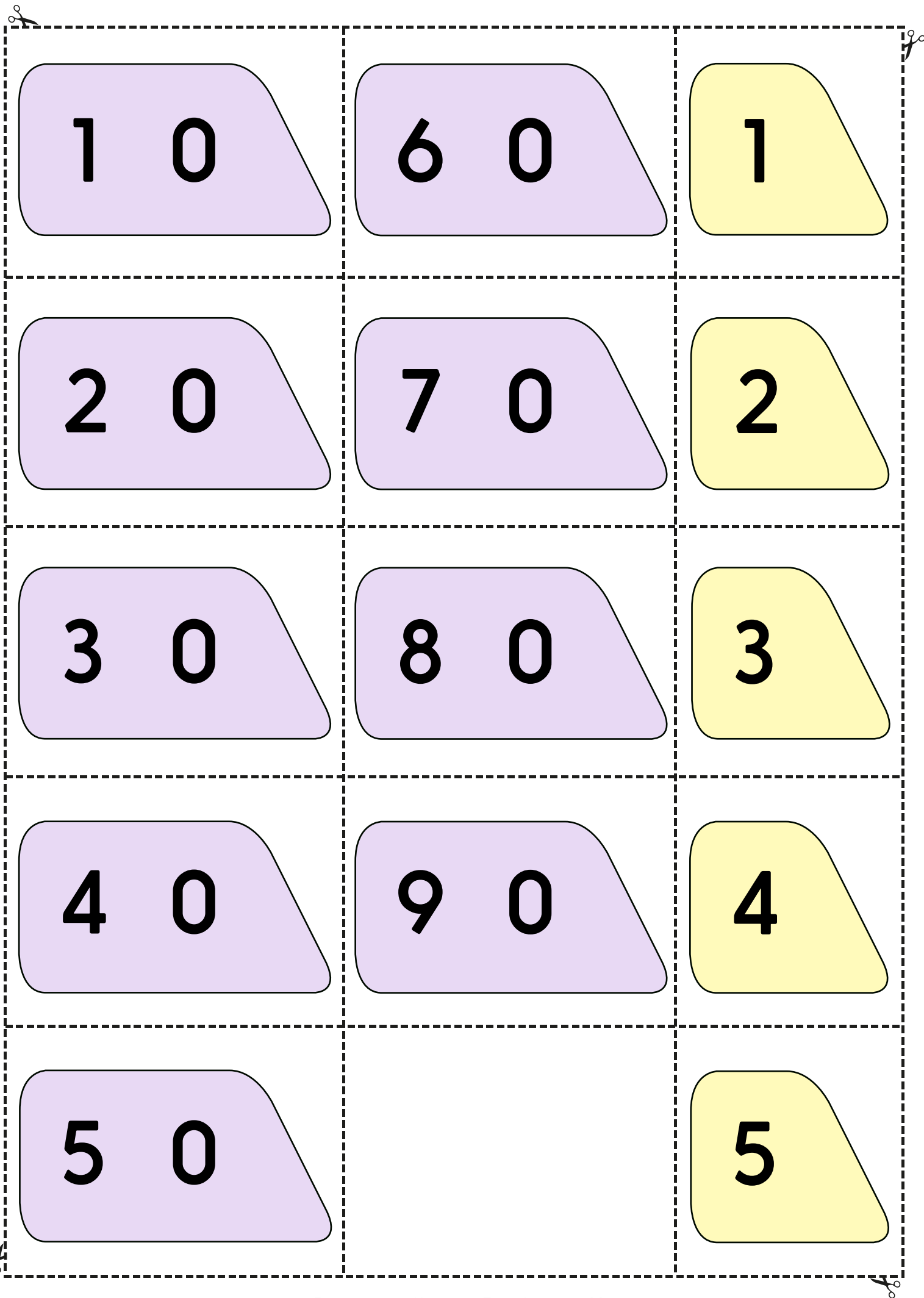


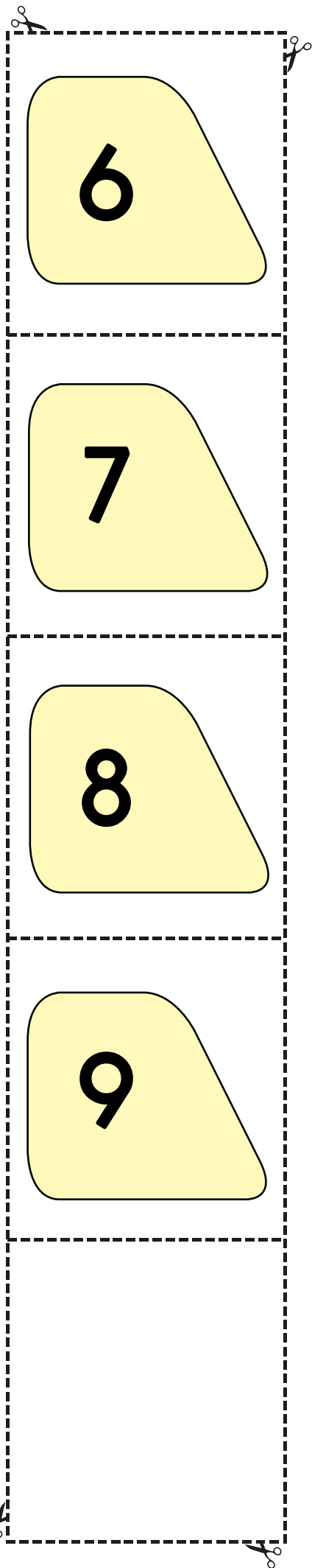
S-t-r-e-t-c-h:

Think of two sums with an answer of 100. Both numbers must be made using both a 10s card and 1s card.

Learning outcomes:

- I can add pairs of 2-digit numbers using partitioning (1s > 10 or 10s > 100).
- I am beginning to add pairs of 2-digit numbers where the 1s come to more than 10 and 10s come to more than 100.





Check your understanding

Questions

Add four hundred and fifty-six to three hundred and seventy-three.

What is the total of two hundred and sixty-eight and two hundred and eighty-four?

Write the missing numbers

$$348 + 174 = \square$$

$$\square - 356 = 138$$

$$647 + 258 = \square$$

$$\square - 386 = 247$$

278 people live on one side of a street. 264 live on the other side.

How many people live on the street altogether?

Check your understanding

Answers

Add four hundred and fifty-six to three hundred and seventy-three. 829

For this, and subsequent 3-digit additions, children should be using the expanded column method. Errors may be due to wrongly partitioning numbers, lining them up incorrectly, procedural errors, i.e. what to do when the 1s exceed 10 or the 10s exceed 100, or arithmetical errors.

What is the total of two hundred and sixty-eight and two hundred and eighty-four?
552

Write the missing numbers

$$348 + 174 = 522$$

$$494 - 356 = 138$$

$$647 + 258 = 905$$

$$633 - 386 = 247$$

Some may not recognise the second and fourth question as ones to solve using addition.

278 people live on one side of a street. 264 live on the other side.

How many people live on the street altogether? 542 people