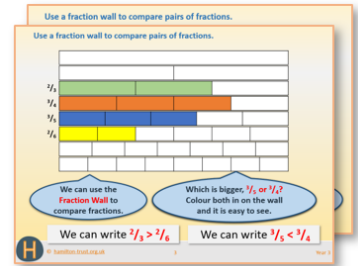


# Week 8, Day 1

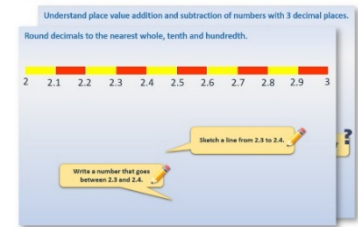
## Written addition (1)

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

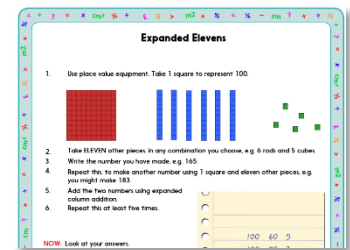
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



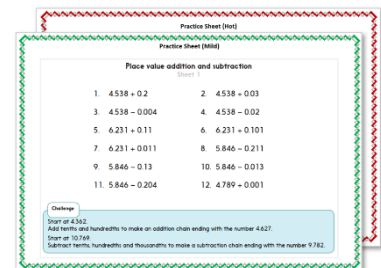
OR start by carefully reading through the **Learning Reminders**.



2. Have a go at the **Investigation**.... This gives lots of addition practice and is REALLY intriguing...



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



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



## Learning Reminders

Add 3-digit numbers using expanded addition.

$$\begin{array}{r} 500 \ 20 \ 8 \\ + 300 \ 30 \ 3 \\ \hline 800 \ 60 \ 1 \end{array}$$

$$800 + 60 + 1 = 861$$

Let's revise how to use expanded addition to work out  $528 + 333$ .

1. The numbers are **partitioned**, lined up in 100s, 10s and 1s and a **blank space** left under the second number.

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

3. **Next add the 10s...**  
 $20 + 30 + 10 = ?$

4. **Lastly the 100s...**  
 $500 + 300 = ?$

5. Finally **recombine** 800, 60 and 1....

## Learning Reminders

Add 3-digit numbers using expanded addition.

$$\begin{array}{r} 300 \ 60 \ 2 \\ + 400 \ 80 \ 3 \\ \hline 800 \ 40 \ 5 \end{array}$$

$$800 + 40 + 5 = 845$$

3. Next add the 10s...

$$60 + 80 = ?$$

The **10s come to more than 100** so we write 100 in the **waiting line** under the 100s and 40 under the 10s in the **answer line**.

Now let's try  $362 + 483$ .

1. **Partition and** line up the numbers. Remember to leave a **blank space** left under the second number.

2. **Add the 1s.**  $2 + 3 = ?$

4. **Lastly the 100s...**

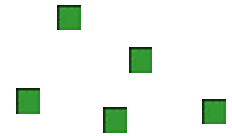
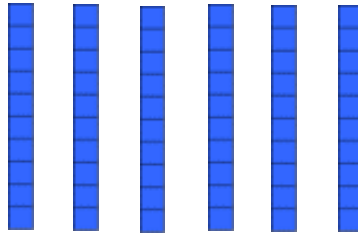
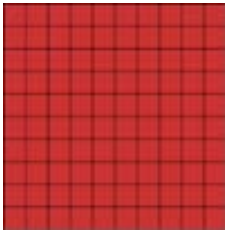
$$300 + 400 + 100 = ?$$

5. Finally **recombine** 800, 40 and 5....

## Investigation

### Expanded Elevens

- Use place value equipment. Take 1 square to represent 100.



- Take ELEVEN other pieces, in any combination you choose, e.g. 6 rods and 5 cubes.
- Write the number you have made, e.g. 165.
- Repeat this, to make another number using 1 square and eleven other pieces, e.g. you might make 183.
- Add the two numbers using expanded column addition.
- Repeat this at least five times.

**NOW:** Look at your answers.

Add the digits, e.g. 348 is  $3 + 4 + 8 = 15$

If you get a 2-digit answer, add the digits, e.g.  $1 + 5 = 6$

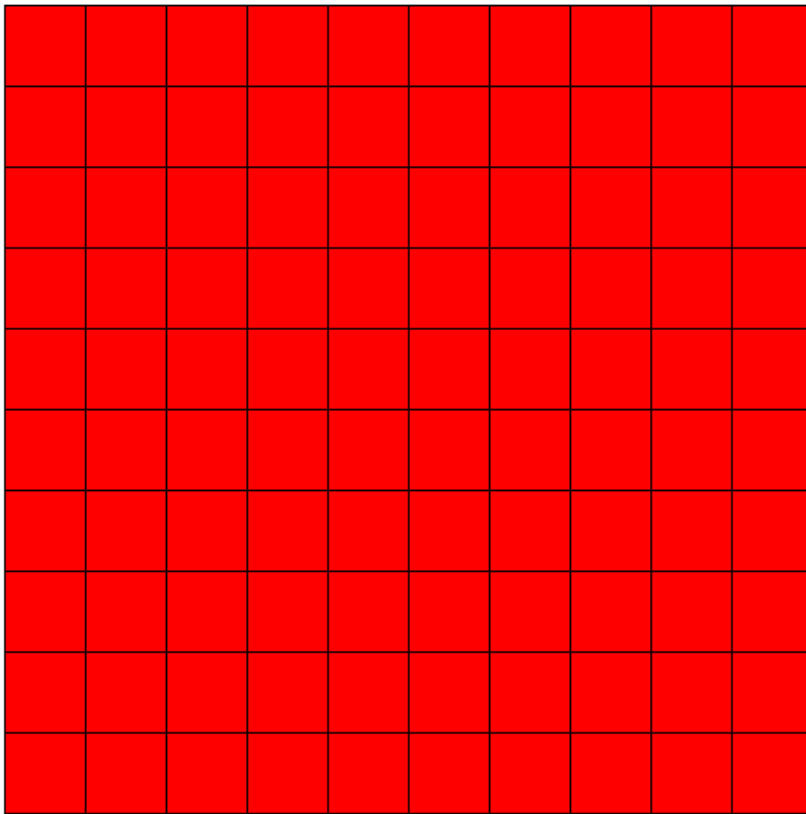
Do this for each answer.

What do you notice?

	100	60	5		
	100	80	3		
	+				

# Investigation

## Expanded Elevens



## Practice Sheet Mild

### Expanded addition

1.

400	20	3
300	40	5

---

2.

600	10	3
200	50	6

---

3.

800	30	4
100	20	5

---

4.

300	40	2
200	50	6

---

5.

400	30	8
200	10	4

---

6.

500	40	9
200	30	5

---

## Practice Sheet Hot

### Expanded addition

$$291 + 342 =$$

$$383 + 274 =$$

$$445 + 391 =$$

$$470 + 384 =$$

$$635 + 174 =$$

$$237 + 157 =$$

$$828 + 136 =$$

$$656 + 228 =$$

$$528 + 407 =$$

$$436 + 258 =$$

## Practice Sheets Answers

### Expanded addition (mild)

1.  $423 + 345 = 768$
2.  $613 + 256 = 869$
3.  $834 + 125 = 959$
4.  $342 + 256 = 598$
5.  $438 + 214 = 652$
6.  $549 + 235 = 784$

### Expanded addition (hot)

$$237 + 157 = 394$$

$$828 + 136 = 964$$

$$656 + 228 = 884$$

$$528 + 407 = 935$$

$$436 + 258 = 694$$

$$291 + 342 = 633$$

$$383 + 274 = 657$$

$$445 + 391 = 836$$

$$470 + 384 = 854$$

$$635 + 174 = 809$$



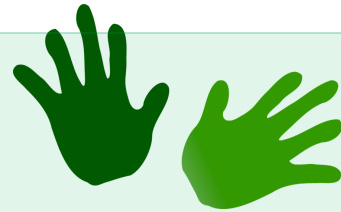
## A Bit Stuck?

### More split sums

#### Work in pairs

#### Things you will need:

- A set of 100s, 10s and 1s place value cards
- A pencil



#### What to do:

- Shuffle the 10 to 50 cards and place face down in a pile. Shuffle the 1 to 9 cards and place face down.
- Take the top card from each pile and put them together to make a 2-digit number.
- Take the next card from each pile 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 two more times.
- Play again, but this time shuffle the 10 to 90 cards, and the 1 to 5 cards.
- Repeat at least two more times.

$47 + 26$   
 $= 40 + 20 + 7 + 6$   
 $= 60 + 13$   
 $= 73$

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

Use 10 to 90 and 1 to 9 cards so that sometimes the 1s will come to more than 10 and the 10s will come to more than 100.

#### 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 the 10s come to more than 100.

1 0 0

6 0 0

2 0 0

7 0 0

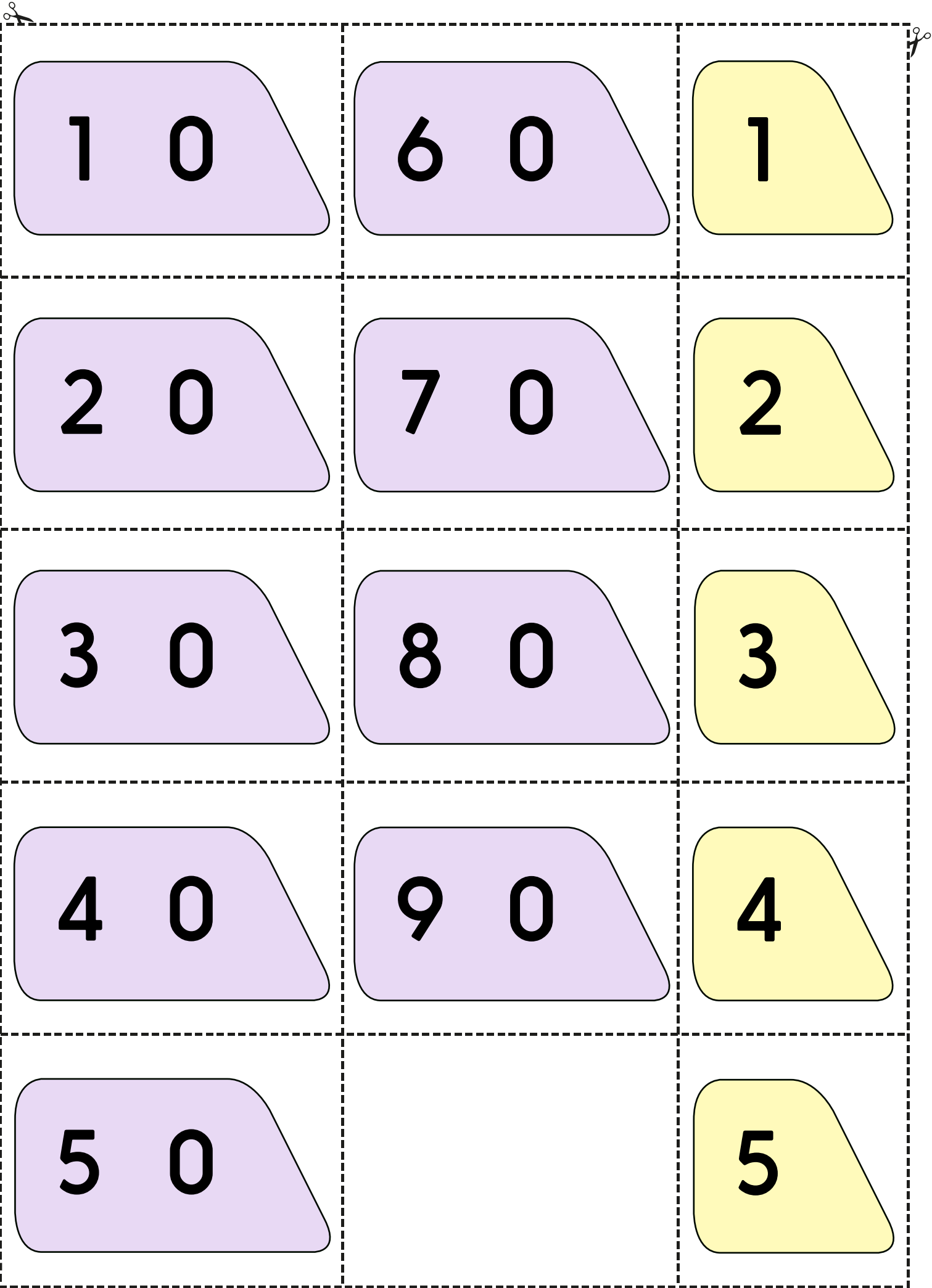
3 0 0

8 0 0

4 0 0

9 0 0

5 0 0



1 0

6 0

1

2 0

7 0

2

3 0

8 0

3

4 0

9 0

4

5 0

5

