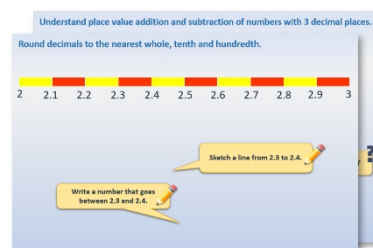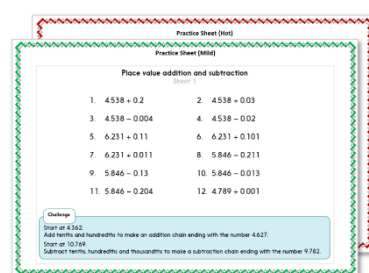# Week 14, Day 2
Add pairs of 2-digit numbers (2)

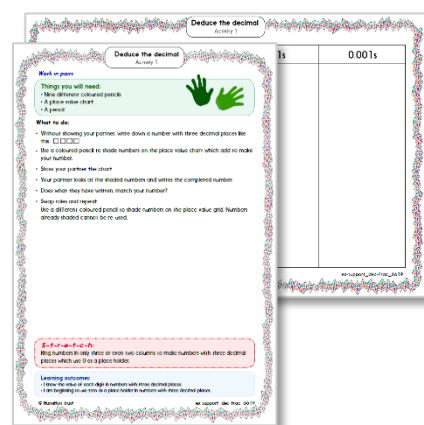**Each day covers one maths topic. It should take you about 1 hour or just a little more.**

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

Learning Reminders

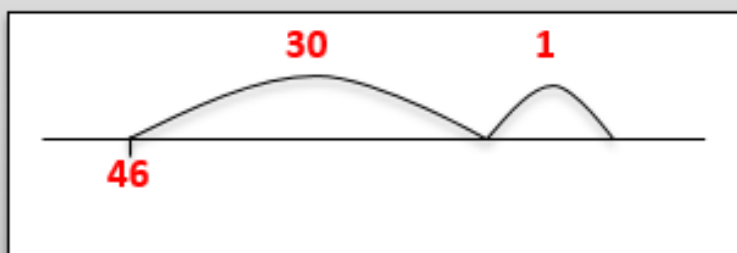## Add pairs of 2-digit numbers by partitioning or counting on.

31 + 46

How would you work out the answer to this addition?

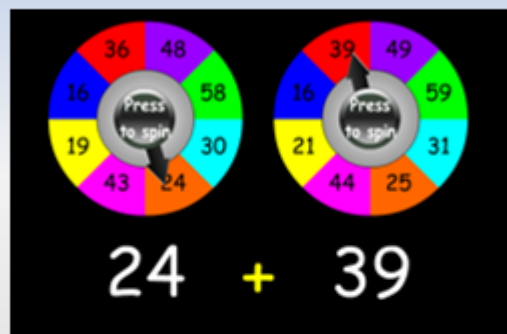We could use place value cards, **partitioning** each number, adding the 10s and 1s, then **re-combining**.

Or we can use **counting on**.
Start with the largest number and count on the 10s then 1s.
We can draw an empty **number line** to help.

3 1   4 6

30   1
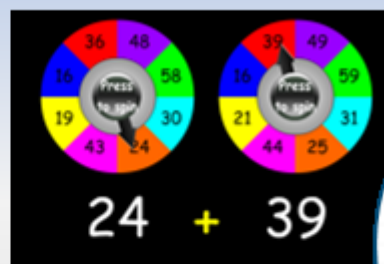
46

Learning Reminders

Add pairs of 2-digit numbers by partitioning or counting on.

For each example think which would be the best way to solve it.
Look for the most **efficient** way and don't forget to use your **number bonds!**

24 + 39

36 + 25

45 + 24

Add pairs of 2-digit numbers by partitioning or counting on.

Different people may choose different strategies, but here are some common ways.

24 + 39

Here, we can pretend that we are adding 40!

Add and adjust.
24 + 39
= 24 + 40 − 1
= 64 − 1 = 63

36 + 25

Partitioning.
36 + 25
= 50 + 11
= 60 + 1 = 61

45 + 24

Counting on.
45 + 24
= 45 + 20 + 4
= 65 + 4 = 69

Practice Sheet Mild
Adding two 2-digit numbers

Add the following 2-digit numbers either using partitioning OR counting on in 10s then 1s.

1. 54 + 23

2. 45 + 44

3. 31 + 57

4. 36 + 46

5. 52 + 37

6. 31 + 42

7. 38 + 54

8. 47 + 35

9. 66 + 23

10. 45 + 35

Challenge

Write the same number in both boxes to make the sum correct.

☐ + ☐ = 68

Practice Sheet Hot
More adding two 2-digit numbers

Add the following 2-digit numbers either using partitioning OR counting on in 10s then 1s.

1. 43 + 39

2. 68 + 25

3. 32 + 58

4. 47 + 47

5. 39 + 61

6. 31 + 42

7. 46 + 35

8. 33 + 54

9. 67 + 33

10. 47 + 32

11. 36 + 56

12. 66 + 23

13. 68 + 33

14. 45 + 35

15. 44 + 58

Challenge

Find three different pairs of numbers that total 91.

Practice Sheet Answers

Practice Sheet (Mild)

1. 54 + 23 = 77
2. 45 + 44 = 89
3. 31 + 57 = 88
4. 36 + 46 = 82
5. 52 + 37 = 89
6. 31 + 42 = 73
7. 38 + 54 = 92
8. 47 + 35 = 82
9. 66 + 23 = 89
10. 45 + 35 = 80

Challenge

34 + 34 = 68

Practice Sheet (Hot)

1. 43 + 39 = 82
2. 68 + 25 = 93
3. 32 + 58 = 90
4. 47 + 47 = 94
5. 39 + 61 = 100
6. 31 + 42 = 73
7. 46 + 35 = 81
8. 33 + 54 = 87
9. 67 + 33 = 100
10. 47 + 32 = 79
11. 36 + 56 = 92
12. 66 + 23 = 89
13. 68 + 33 = 101
14. 45 + 35 = 80
15. 44 + 58 = 102

Challenge

Accept answers with two 2-digit numbers that add up to 91, e.g.

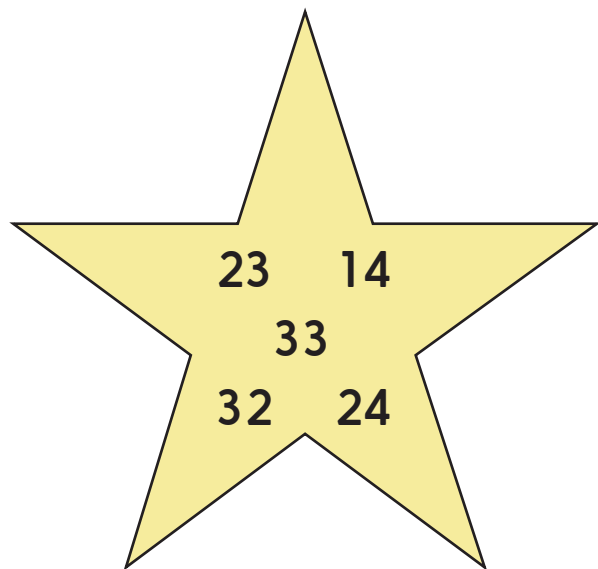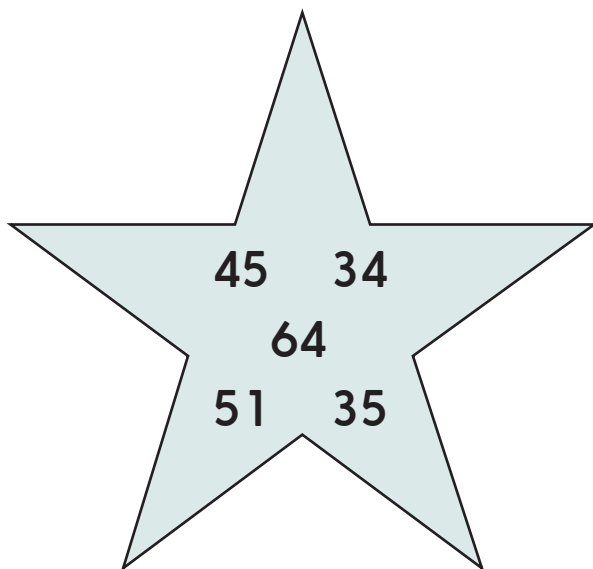|	
63 + 28	*39 + 52*
55 + 36	*48 + 43*
71 + 20	*73 + 18*

Blue star
45   34
64
51   35

Yellow star
23   14
33
32   24

What to do:

- Pick a number from each star.

- Make each number using place value cards.

- Collect the 10s and add them.

- Collect the 1s and add them.

- Now add your two answers.

- Write the addition.

64 + 23

6 4   2 3

6 0   2 0   4   3

80 + 7 = 87

S-t-r-e-t-c-h:
Your challenge is to look for a pair of numbers with a total between:

- 50 and 60
- 60 and 70
- 70 and 80
- 80 and 90
- 90 and 100

Investigation
Diagonal hundreds

1. Copy this grid.

	Ones digit is less than 5	Ones digit is more than 5

2. Write a two-digit number in each space. Each number should be less than 40.
3. In the left column, the ones digit must be less than 5.
4. In the right column, the ones digit must be more than 5.
5. Add the numbers in the top left and bottom right corners (the diagonal).
6. Add the numbers in the bottom left and top right corners (the other diagonal).
7. Add your two answers. YOU ARE TRYING TO GET A TOTAL OF EXACTLY 100!
8. Start again, and try another pair of numbers in the first column and another pair in the second column.
9. How close to 100 is your total now?

   Discuss how you can bring your total closer to 100.

10. Try with different start numbers in your square. Can you get a total of 100? Can you get a total of 100 in more than one way?

Ones digit is less than 5	Ones digit is more than 5
32	28
21	18