



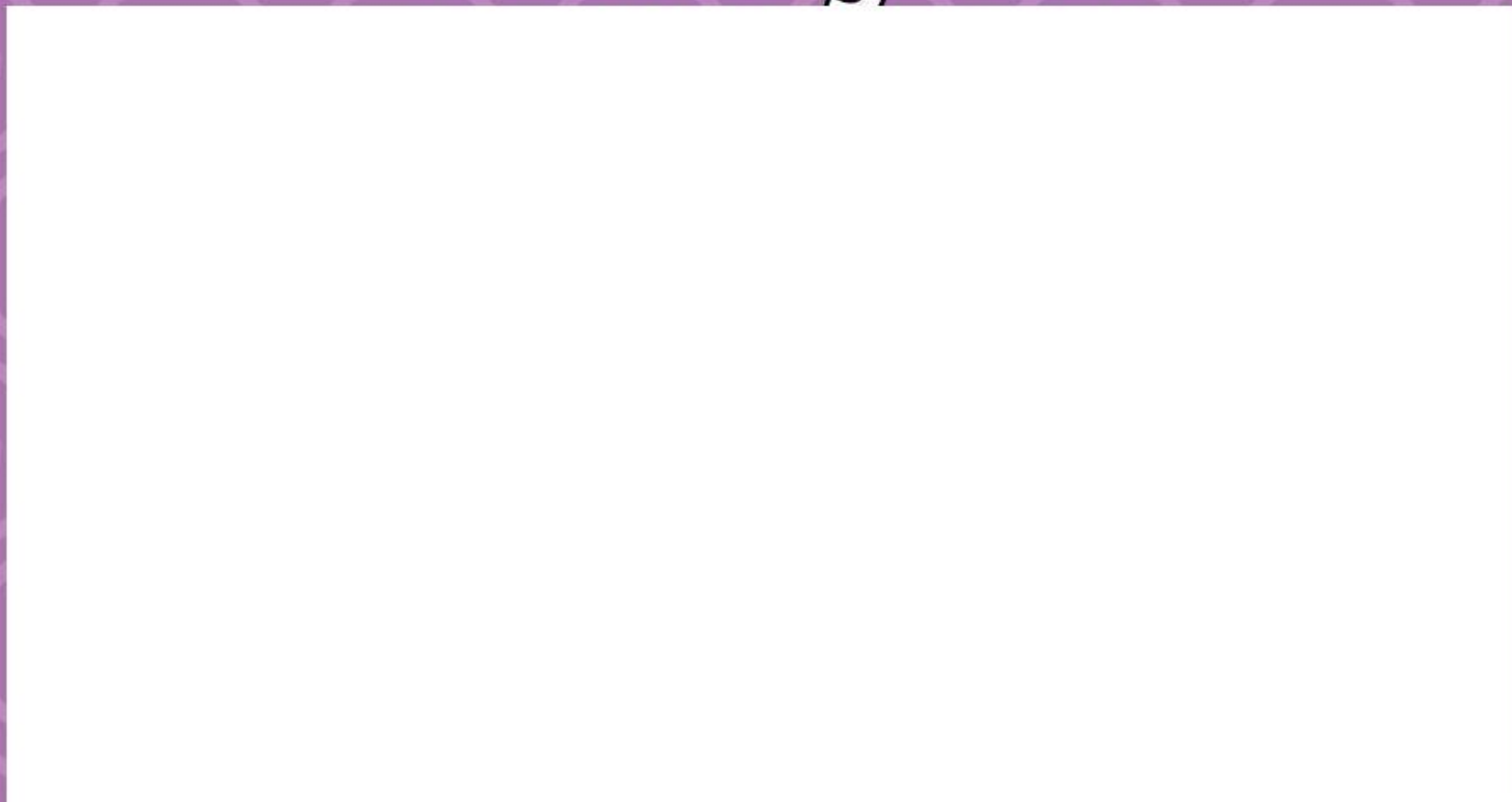
# Maths

Addition and Subtraction

**Need a coherently planned sequence of lessons to complement this resource?**



# Add Two 2-Digit Numbers, Crossing Ten



# Aim

- To add two 2-digit numbers by adding the ones (crossing 10) and the tens.

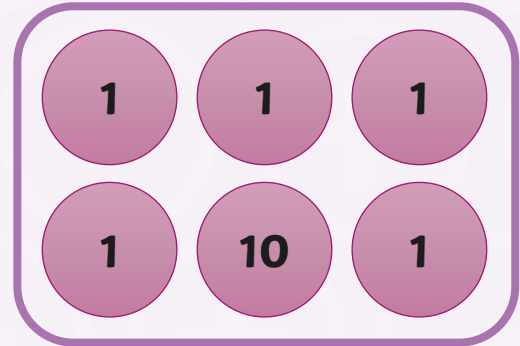
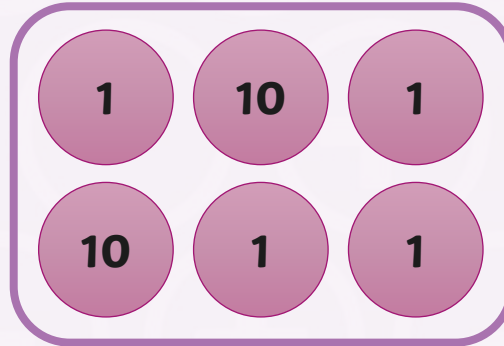
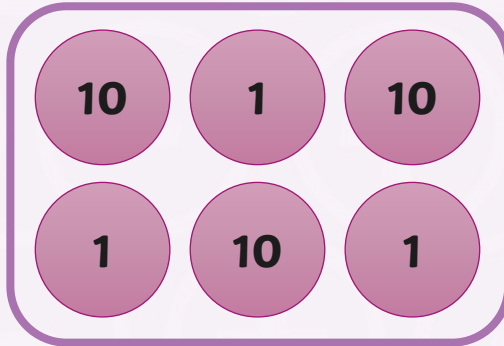
# Success Criteria

- I can use place value grids to add two 2-digit numbers, crossing ten.
- I can use part-whole models to add two 2-digit numbers, crossing ten.

# Remember It



Can you match the numbers with the groups of place value counters?



What would  
have made  
this easier?

33

Can you  
explain why?



# Remember It



Now the tens and ones have their own columns.  
Is it easier to match them with the numbers?

Tens	Ones
10 10	1 1 1 1 1

Tens	Ones
10 10 10	1 1 1 1

Tens	Ones
10	1 1 1

34

Can you explain why?

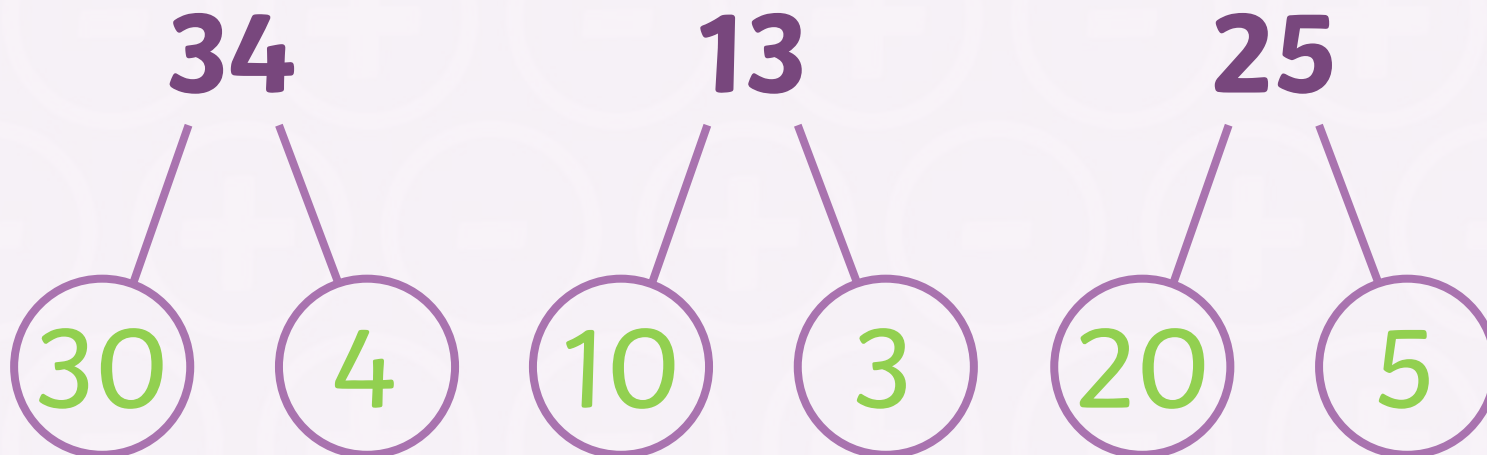


2

# Remember It



Can you use tens and ones to complete the part-whole models?



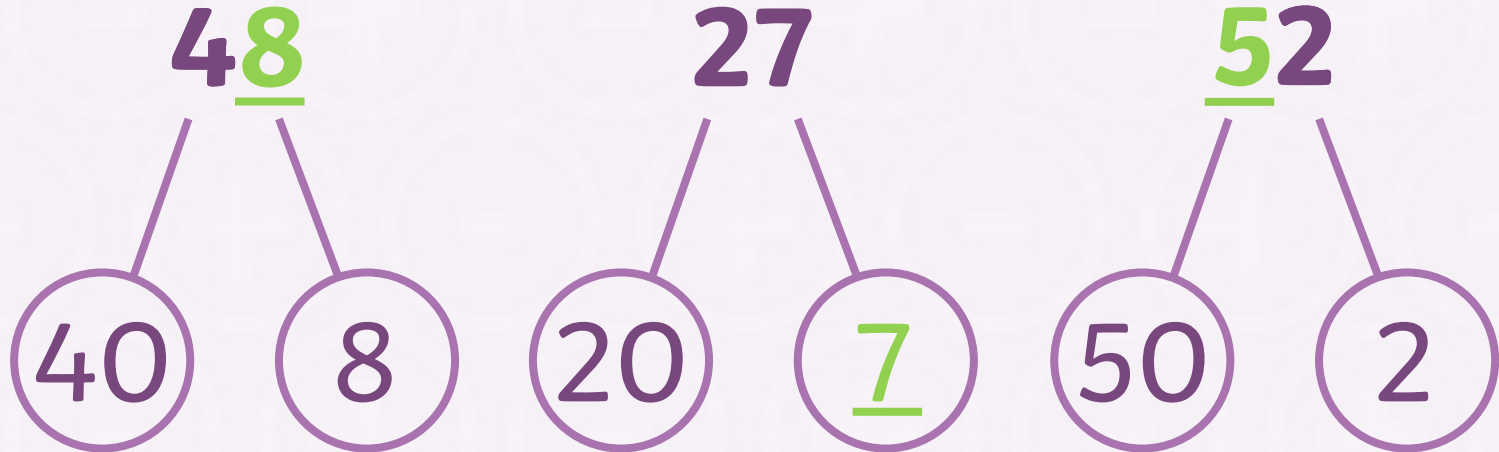
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# Remember It



Can you complete the part-whole models?



Partitioning numbers into tens and ones  
will help us with today's challenges.



# High Score



16

15

nd out by adding their individual score.




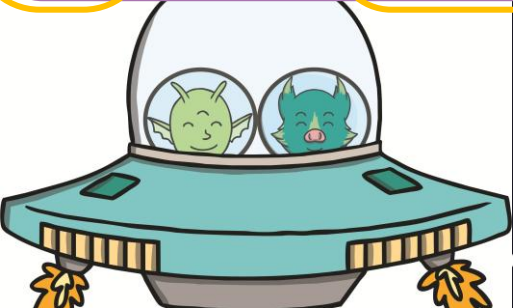

# High Score



Anna used a place value grid to find the total.

Tens	Ones
10	1 1 1 1 1 1
10	1 1 1 1 1

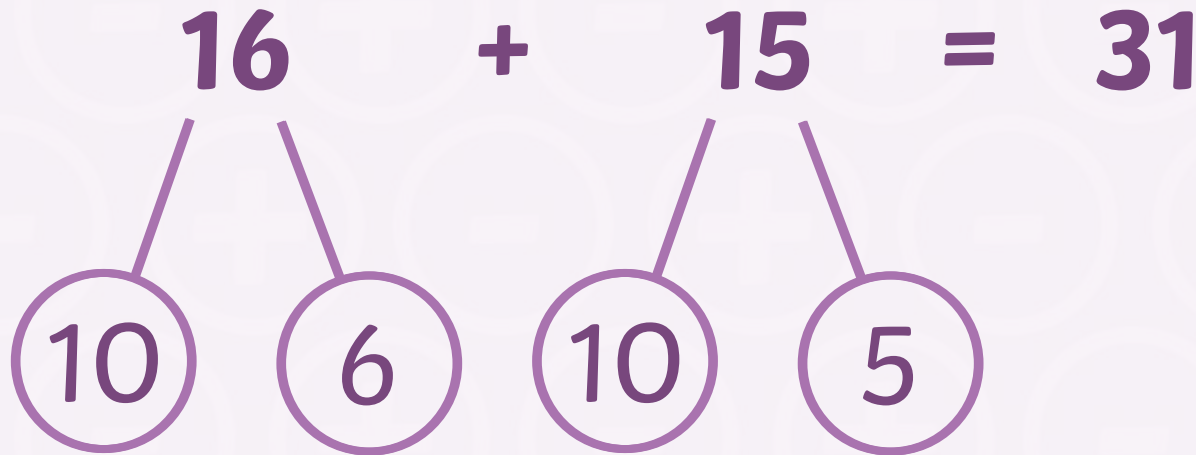
$16 + 15 = 31$   
 $10 + 10 = 20$   
 $6 + 5 = 11$   
 $20 + 11 = 31$



# High Score



Felix used part-whole models to find the total.



$$10 + 10 = 20$$

$$6 + 5 = 11$$

$$20 + 11 = 31$$



# High Score

Let's try some more.



27

14

Will you use place value counters  
or part-whole models?



# High Score



Anna used a place value grid to find the total.

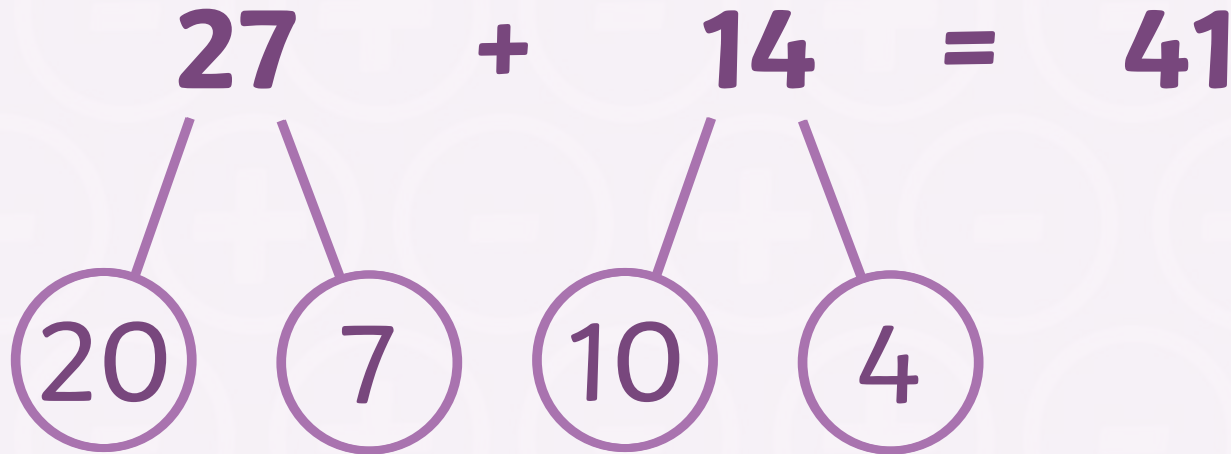
Tens	Ones
10 10	1 1 1 1 1 1 1
10	1 1 1 1

$27 + 14 = 31$   
 $20 + 10 = 30$   
 $7 + 4 = 11$   
 $30 + 11 = 41$

# High Score



Felix used part-whole models to find the total.



$$20 + 10 = 30$$

$$7 + 4 = 11$$

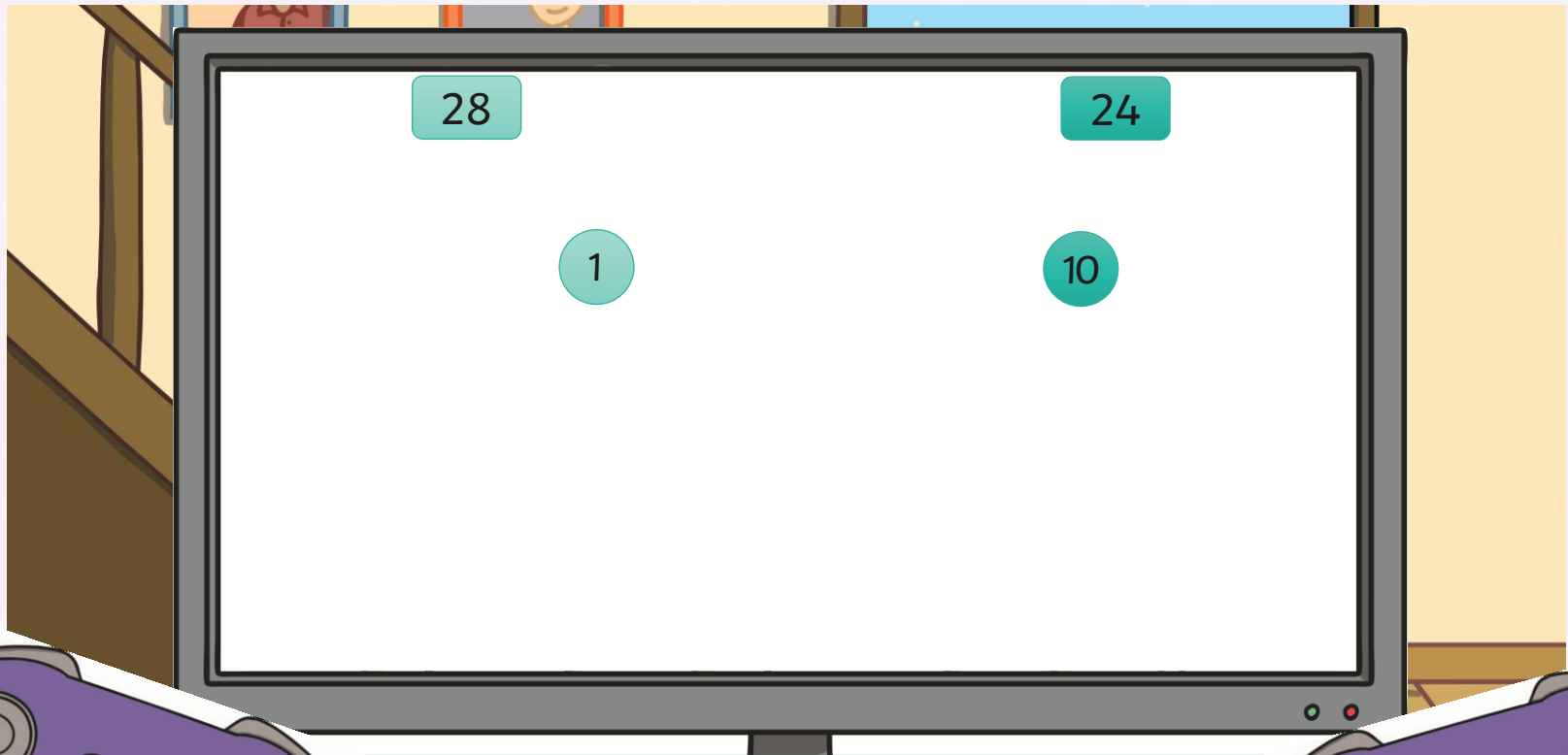
$$30 + 11 = 41$$



# High Score



Use place value columns or part-whole models to find the total.



Which do you prefer?  
Can you explain why?



# High Score



Anna used a place value grid to find the total.

A place value grid is shown with two columns: Tens and Ones. The Tens column contains four 10s blocks, and the Ones column contains twelve 1s blocks. A yellow box highlights the four 10s blocks and the twelve 1s blocks. To the right, a purple box contains the following calculations:

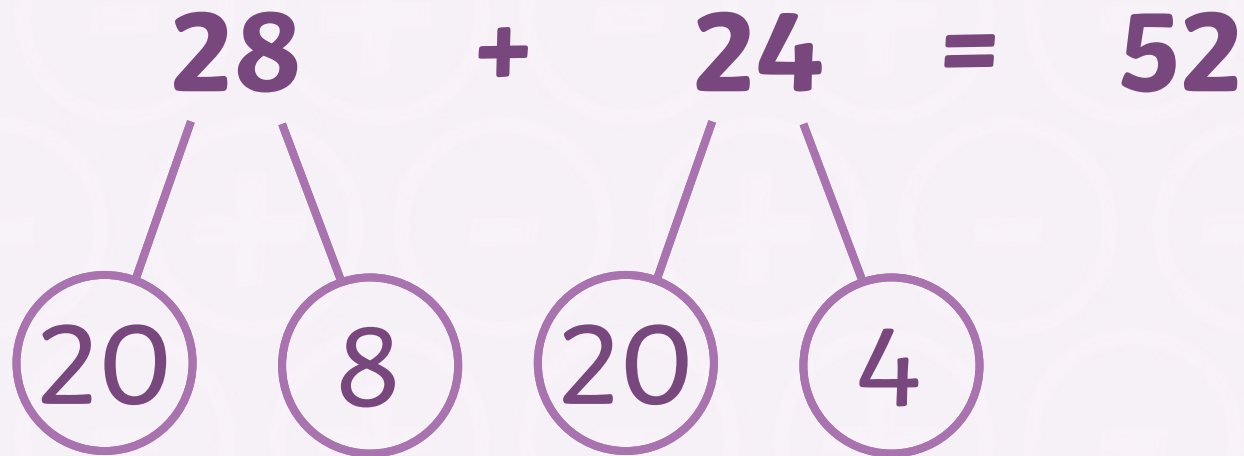
$$28 + 24 = 52$$
$$20 + 20 = 40$$
$$8 + 4 = 12$$
$$40 + 12 = 52$$



# High Score



Felix used part-whole models to find the total.



$$20 + 20 = 40$$

$$8 + 4 = 12$$

$$40 + 12 = 52$$



# High Score Activity



## High Score

To add two 2-digit numbers by adding the ones (crossing 10) and the tens.

Add the scores to find the total

1.

$$16 + 15 = \square$$

$$10 + 10 = \square$$

$$6 + 5 = \square$$

$$\square + \square = \square$$

Tens	Ones
10	1 1 1
10	1 1 1
	1 1

2.

$$\begin{array}{c} 17 \\ \swarrow \searrow \\ 10 \quad 7 \end{array} + \begin{array}{c} 16 \\ \swarrow \searrow \\ 10 \quad 6 \end{array} = \square$$

$$10 + 10 = \square$$

$$7 + 6 = \square$$

$$\square + \square = \square$$

3.

$$18 + 25 = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

Tens	Ones
10	1 1 1 1
10 10	1 1 1 1
	1

4.

$$\begin{array}{c} 27 \\ \swarrow \searrow \\ 20 \quad 7 \end{array} + \begin{array}{c} 26 \\ \swarrow \searrow \\ 20 \quad 6 \end{array} = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

## High Score

Numbers by adding the ones (crossing 10) and the tens.

find the total

$$\square$$

$$= \square$$

$$= \square$$

$$= \square$$

Tens	Ones
10 10	1 1 1 1
10	1 1 1 1
	1

$$+ \begin{array}{c} 26 \\ \swarrow \searrow \\ 20 \quad 6 \end{array} = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square$$

$$= \square$$

$$= \square$$

$$= \square$$

Tens	Ones

$$+ \begin{array}{c} 25 \\ \swarrow \searrow \\ \square \quad \square \end{array} = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

## High Score

adding the ones (crossing 10) and the tens.

the total. Use a place value grid or part-whole





## Diving into Mastery

Dive in by completing your own activity!



Add Two 2-Digit Numbers, Crossing Ten.



Complete the calculations.

$27 + 26 = \square$

$20 + 20 = \square$

$6 + 7 = \square$

$\square + \square = \square$

Tens	Ones
10 10	1 1 1 1
10 10	1 1
	1 1 1 1
	1 1 1

$18 + 17 = \square$



$\square + \square = \square$

$\square + \square = \square$

$\square + \square = \square$



Now pick your favourite method to complete the following:

$32 + 49 = \square$

$45 + 29 = \square$



1
1
1



value  
?  
nd?

for

# Check It



Use place value columns or part-whole models to find the total.

These both make  
the same total

$$37 + 36 =$$

$$49 + 24 =$$

Do you agree?

High Score  
**73**

Use place value grids or part-whole  
models to prove it.

# Aim



- I can add and subtract a multiple of 10 to and from any 2-digit number.

# Success Criteria

- I can use place value grids to add two 2-digit numbers, crossing ten.
- I can use part-whole models to add two 2-digit numbers, crossing ten.

