

## Key Vocabulary

fact families

check

number bonds

compare

related facts

estimate

number line

column addition

carry

exchange

one-step problem

two-step problem

missing number problem

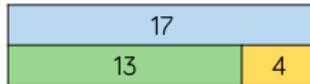
inverse

## Fact families



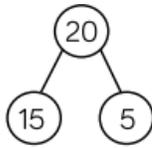
$4 + 3 = 7 \quad 3 + 4 = 7$

$7 - 4 = 3 \quad 7 - 3 = 4$



$13 + 4 = 17 \quad 4 + 13 = 17$

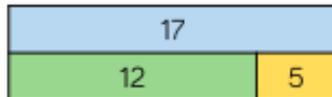
$17 - 4 = 13 \quad 17 - 13 = 4$



$15 + 5 = 20 \quad 5 + 15 = 20$

$20 - 15 = 5 \quad 20 - 5 = 15$

## Check calculations



Using our fact families,  $17 - 12 = 4$  can be checked using the inverse  $12 + 4 = 17$

$18 - 3 = 21$

Know that if subtracting, the answer will be smaller than the number we started with.

$24 + 6 = 84$

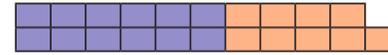
This can't be right because 6 more than 24 is 30. 6 has been added to the tens not the ones.

$25 - 23 = 12$

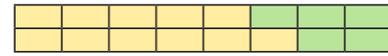
Spot that 25 and 23 are very close together, so the difference won't be 12

## Mental methods

### Compare number sentences



$6 + 4 < 6 + 5$



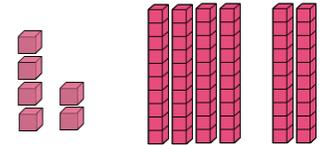
$5 + 3 = 6 + 2$

### Add three 1-digit numbers



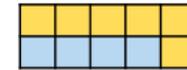
$9 + 5 + 3 = 17$

### Related facts

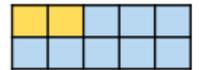


$4 + 2 = 6 \text{ so } 40 + 20 = 60$

### Bonds to 100 (Tens)



$40 + 60 = 100$



$80 + 20 = 100$

## Add and subtract 1s and 10s

### Add and subtract 1s / 1 more 1 less

$24 + 1 = 25$

$24 + 2 = 26$

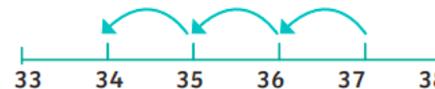
$24 + 3 = 27$



$37 - 1 = 36$

$37 - 2 = 35$

$37 - 3 = 34$



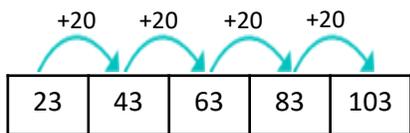
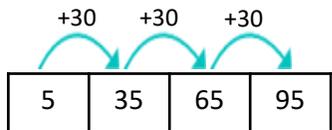
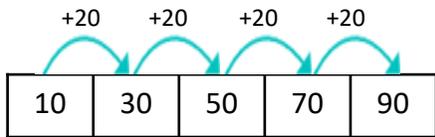
### 10 more or less



When adding or subtracting multiples of 10, **the ones stay the same.**

10 less	Number	10 more
1	11	21
34	44	54

# Add and subtract 10s



When adding tens, the ones stay the same

Tens	Ones

27

+ 40

67

Tens	Ones

72

- 30

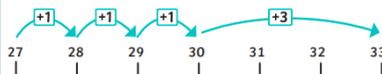
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## Add 2-digit and 1-digit

$$27 + 6 = 33$$



Can you put the larger number in your head and count on the smaller number?



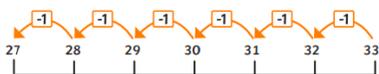
Can you use number bonds?

Tens	Ones

- Partition both the numbers
- Add together the ones
- If we have 10 ones, exchange 10 ones for 1 ten
- How many ones do we have?
- How many tens do we have?

## Subtract 2-digit and 1-digit

$$33 - 6 = 27$$



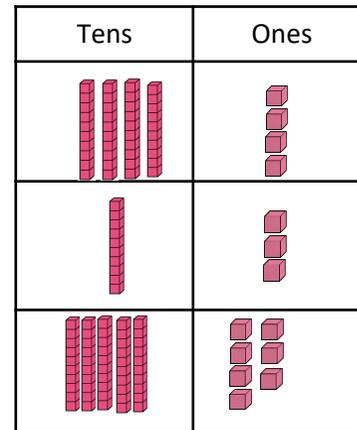
Can you put the larger number in your head and count back the smaller number?



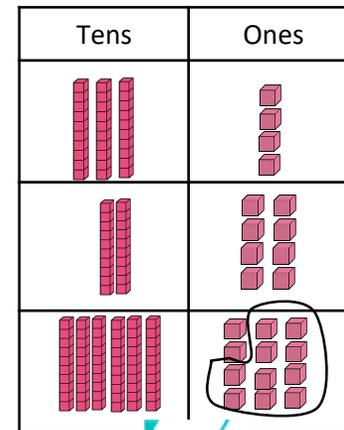
Can you use number bonds?

## Add 2-digit numbers

$$44 + 13 = 57$$



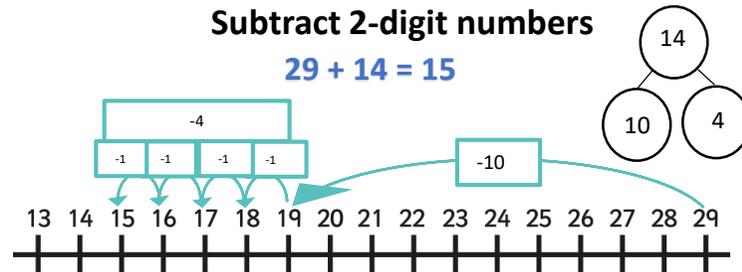
$$34 + 28 = 62$$



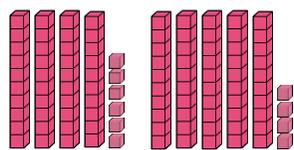
5 tens and 12 ones becomes 6 tens and 2 ones

## Subtract 2-digit numbers

$$29 - 14 = 15$$

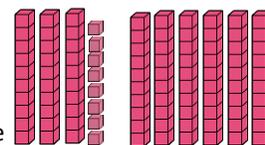


## Number bonds to 100



$$46 + 54 = 100$$

4 tens and 6 ones + 5 tens and 4 ones  
= 9 tens and 10 ones = 10 tens = one hundred



$$38 + 62 = 100$$

3 tens and 8 ones + 6 tens and 2 ones  
= 9 tens and 10 ones = 10 tens = one hundred