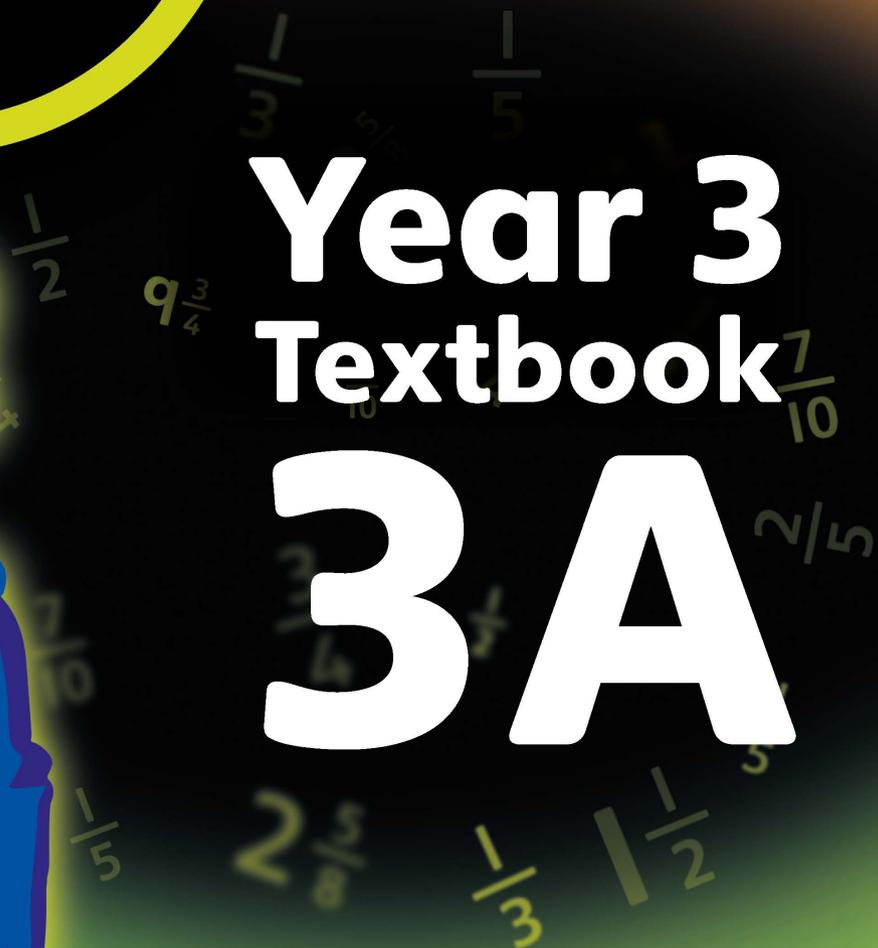


White Rose Maths Edition



Year 3 Textbook 3A



Pearson

Series Editor: Tony Staneff



Year 3 Textbook 3A



flexible



Flo

brave



Astrid

helpful



Sparks

determined



Dexter

Series editor: Tony Staneff

Lead author: Josh Lury

Consultants (first edition): Professor Liu Jian and Professor Zhang Dan

Written by Tony Staneff and Josh Lury



Contents

Unit 1 – Place value within 1,000

Represent and partition numbers to 100

Number line to 100

100s

Represent numbers to 1,000

Partition numbers to 1,000

Partition numbers to 1,000 flexibly

100s, 10s and 1s

Use a number line to 1,000

Estimate on a number line to 1,000

Find 1, 10 and 100 more or less

Compare numbers to 1,000

Order numbers to 1,000

Count in 50s

End of unit check

Unit 2 – Addition and subtraction (1)

Use known number bonds

Add/subtract 1s

Add/subtract 10s

Add/subtract 100s

Spot the pattern

Add 1s across 10

Add 10s across 100

Subtract 1s across 10

Subtract 10s across 100

Make connections

End of unit check

Unit 3 – Addition and subtraction (2)

Add two numbers

Subtract two numbers

6

8

12

16

20

24

28

32

36

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Your teacher will tell you which page you need.



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Let's get started!



How to use this book

These pages make sure we're ready for the unit ahead. Find out what we'll be learning and brush up on your skills!



Unit 5
Multiplication and division 2

In this unit we will ...
⚡ Learn the 3, 4 and 8 times-tables
⚡ Find a simple remainder when a number is divided
⚡ Use a bar model to solve multiplication and division problems

We will use bar models to help solve multiplication and division problems.

We will need some maths words. How many of these have you used before?

equal multiply divide multiple
times-tables sharing grouping
array bar model repeated addition
multiplication sentence multiplication fact
division sentence division fact remainder

We need to use number lines too. These will help us understand multiplication and division.

186 187

Discover

Lessons start with **Discover**.

Here, we explore new maths problems.

Can you work out how to find the answer?

Don't be afraid to make mistakes.
Learn from them and try again!

Unit 5: Multiplication and division (2), Lesson 1

Multiply by 3

Discover

1 a) There are 3 balls under each cup.
How many balls are there in total?
Write down a **multiplication sentence** to work out the answer.

b) Work out 8×3 .

188



Share

Next, we share our ideas with the class.

Did we all solve the problems the same way?
What ideas can you try?

Unit 5: Multiplication and division (2), Lesson 1

Share

a) Under each cup there are 3 balls.

I did a repeated addition, using a number line to help me.

I could count them one by one.

There are 21 balls in total.

This is a 7×3 array. $7 \times 3 = 21$

Now I know 7 groups of 3. I can easily work out 8 groups of 3.

b) $8 \times 3 = 24$

189

Think together

Then we have a go at some more problems together. Use what you have just learnt to help you.

We'll try a challenge too!



This tells you which page to go to in your Practice Book.

Unit 5: Multiplication and division (2), Lesson 1

Think together

1. There are 3 balls under each cup.

How many balls are there?

$\square \times 3 = \square$

2. How many hats are there?

$\square \times \square = \square$

3. What is the same? What is different?

Discuss with a partner.

I think they all have the same number of objects.

There are 3 groups of 5 marbles. I wonder if they could make equal groups a different way.

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Practice book 3A p105

Unit 5: Multiplication and division (2)

End of unit check

1. David shares 24 grapes between 3 people.

How many grapes does each person get?

21 6 8 72

2. Which calculation will not work out the total number of cakes?

$12 + 12 = 12$ 4×12
 12×4 $4 + 4 + 4 + 4$

3. Which multiplication gives the greatest answer?

7×3 8×2 6×4 0×10

4. Which multiplication gives the same answer as 6×8 ?

3×8 4×5
 12×4 12×16

5. A pack contains 4 bread rolls.

How many bread rolls are there in 7 packs?

11 35 28 24

6. Lani shares 16 cubes equally between 3 people.

How many cubes do they each get? How many cubes are left over?

1 cube, 5 left over 5 cubes, 0 left over
 4 cubes, 3 left over 3 cubes, 1 left over

7. What is the missing value?

$\square \times 4 = 24 + 3$

240

241

Practice book 3A p107

At the end of each unit there's an **End of unit check**. This is our chance to show how much we have learnt.

Unit 1

Place value within 1,000



In this unit we will ...

- ⚡ Count in 100s
- ⚡ Partition a number in 100s, 10s and 1s
- ⚡ Find 100, 10 and 1 more or less
- ⚡ Compare and order numbers up to 1,000
- ⚡ Count in 50s

In Year 2 we used place value grids to organise our work.
What number does this show?

T	O





We will need some maths words.
How many of these can you remember?

hundreds (100s)

tens (10s)

ones (1s)

place value

more

less

greater than ($>$)

less than ($<$)

equal to

order

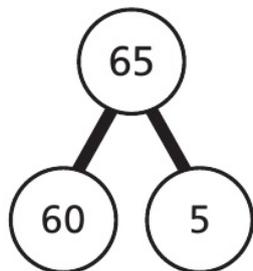
compare

estimate

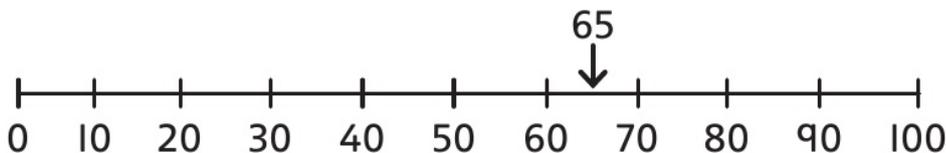
exchange

ascending

descending



We will also use
part-whole models
and number lines.



Represent and partition numbers to 100

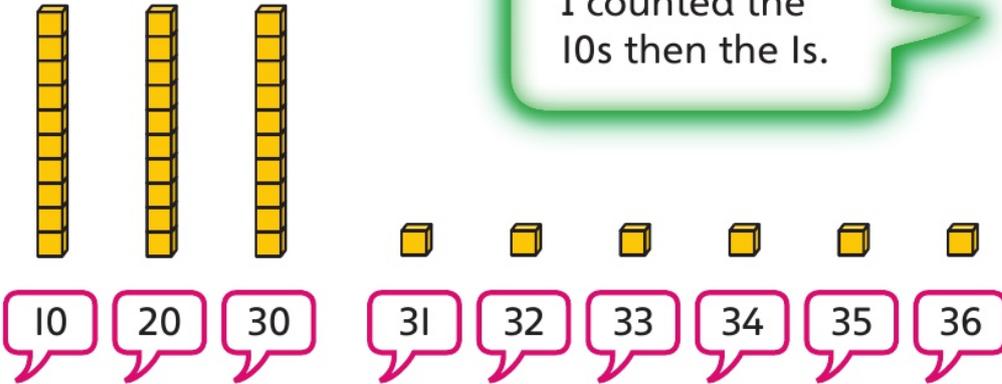
Discover



- I** a) Draw or make Emma's number from base 10 equipment.
What number has Emma made?
- b) What number has Andy made?

Share

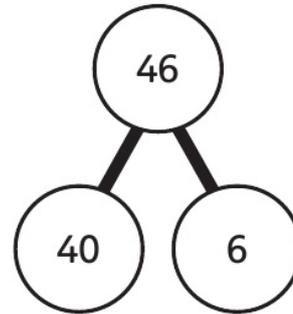
a)



Emma has made the number 36.

b)

T	O
4	6



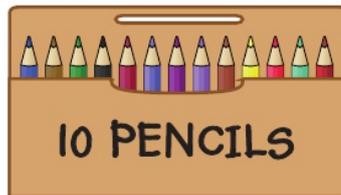
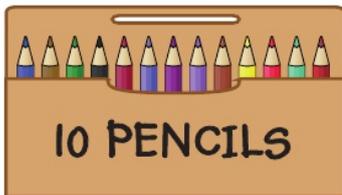
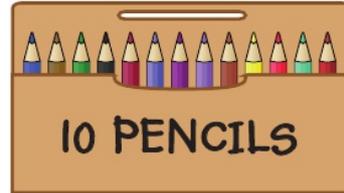
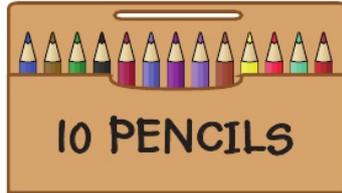
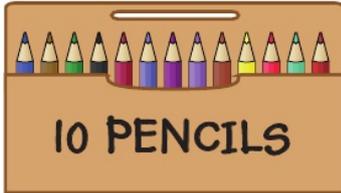
Andy has made the number 46.

I put the base 10 equipment into a place value grid. Then I drew a part-whole model.

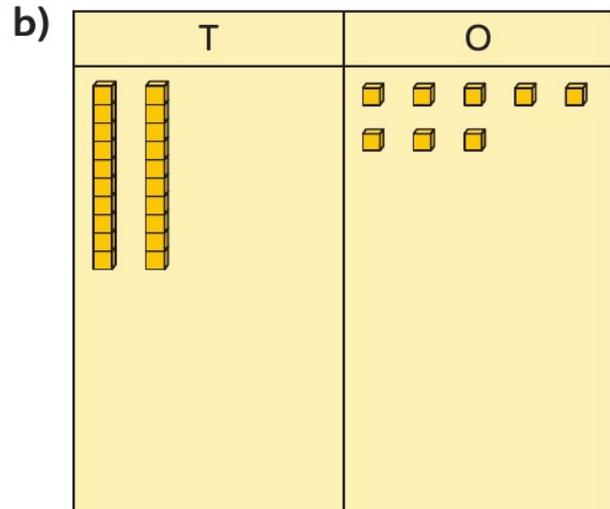
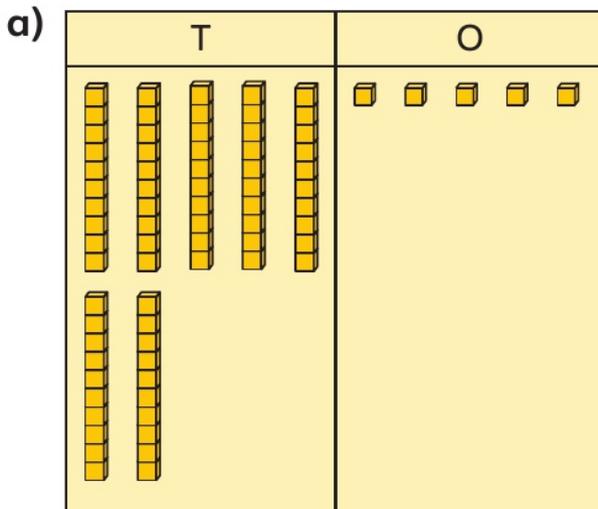


Think together

1 How many colour pencils are there?

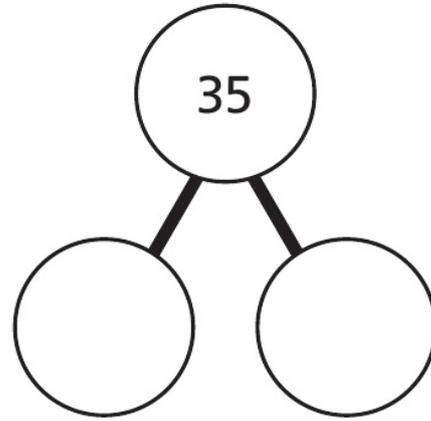
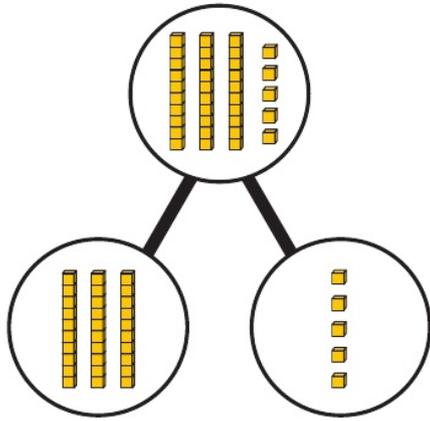


2 What numbers are shown here?

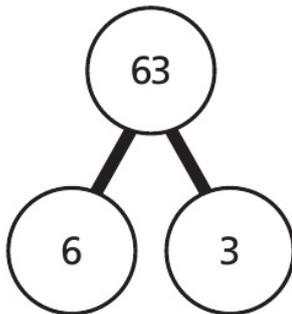


CHALLENGE

- 3 a) Complete the part-whole model. Use base 10 equipment to help you.



- b) What is the mistake in this part-whole model?

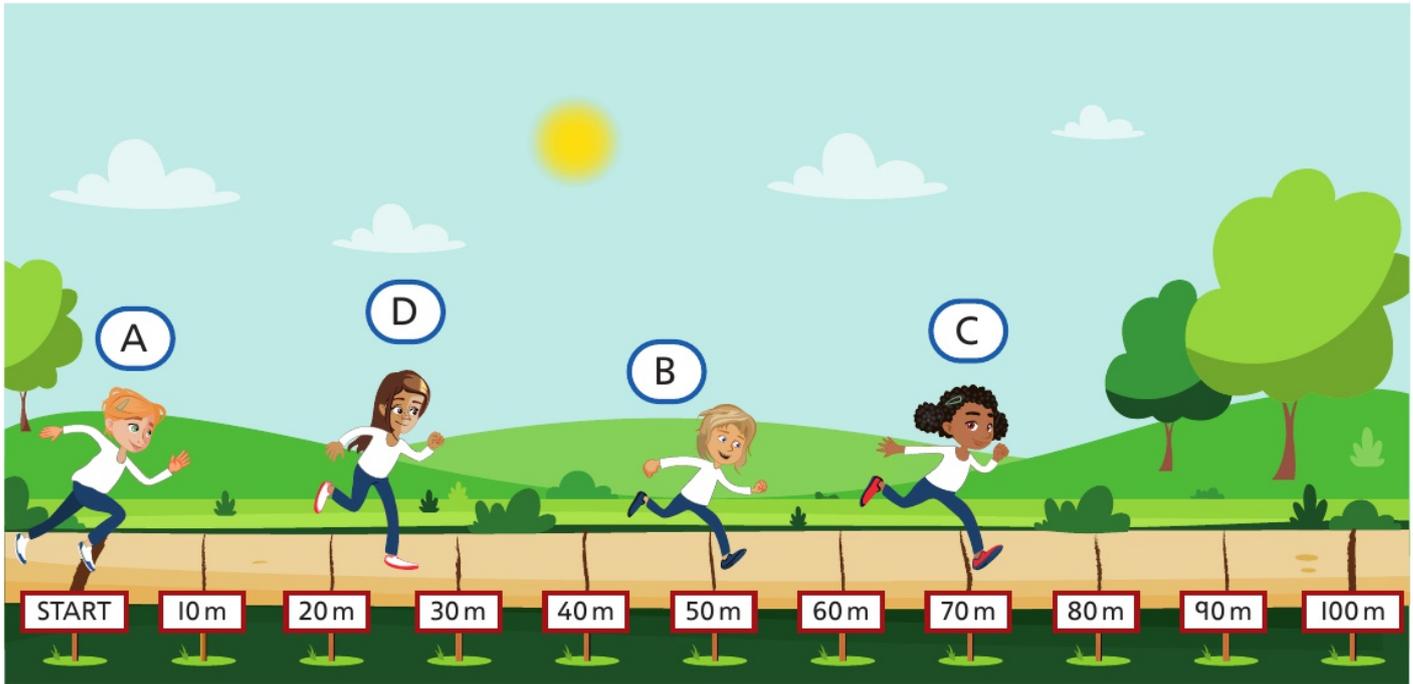


I wonder if I can use the base 10 equipment to help me see what is wrong.



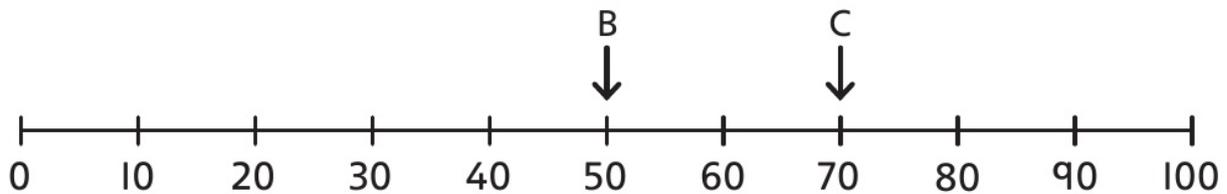
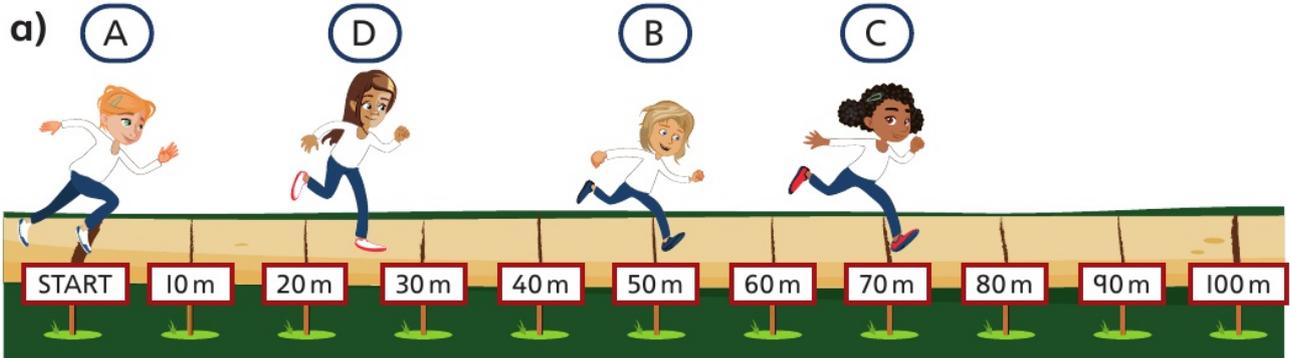
Number line to 100

Discover



- I** a) How far has runner B run?
How far has runner C run?
- b) How far has runner D run?

Share



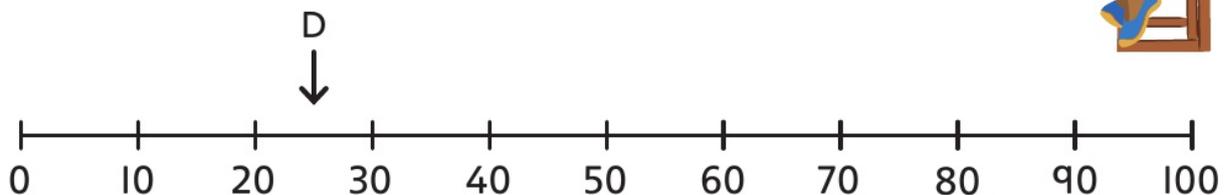
Runner B has run 50 metres.

Runner C has run 70 metres.

I can use the
number line to
see the positions
on the track.



b) Runner D is half-way between 20 and 30.

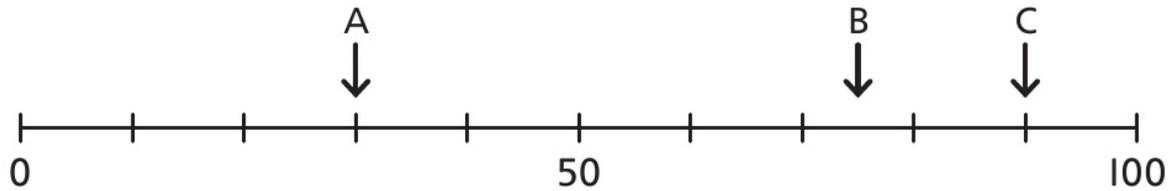


Half-way between 20 and 30 is 25.

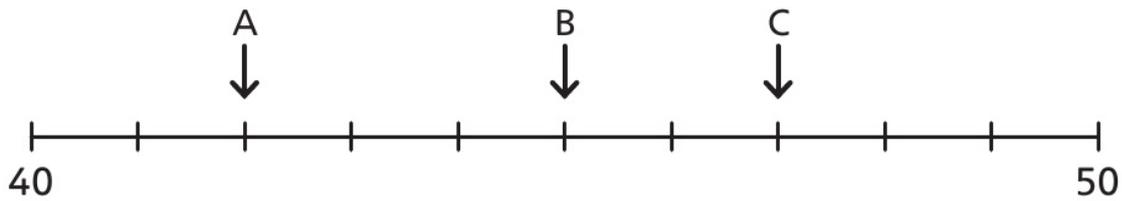
Runner D has run 25 metres.

Think together

1 What numbers are the arrows pointing to?



2 What numbers are the arrows pointing to?



I don't think this number line is going up in 10s. I will check.

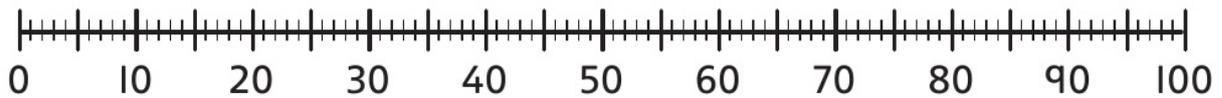


3

This number line is marked in 10s and 1s.



CHALLENGE



a) Point to the 10s markings.

Point to the 1s markings.

b) Point to the following numbers.

25

57

92

I know that 57 lies between 50 and 60.



100s

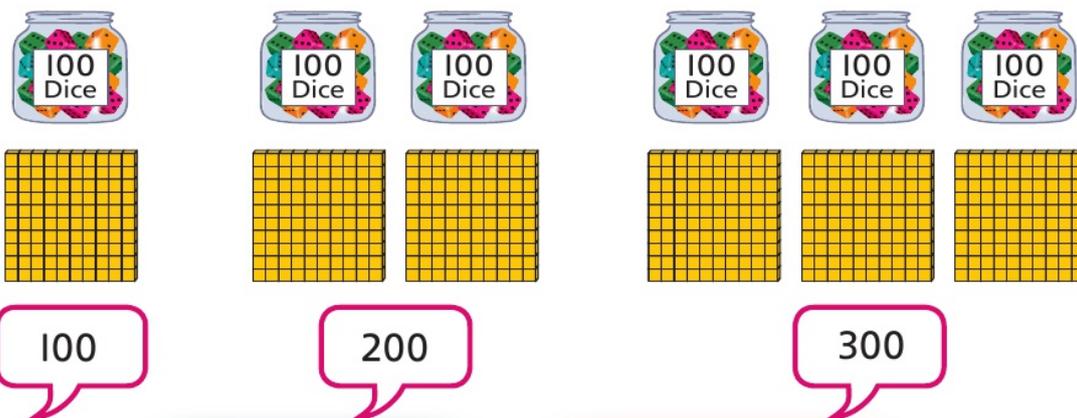
Discover



- 1 a) How many dice?
- b) How many counters?

Share

a) We can count the dice.



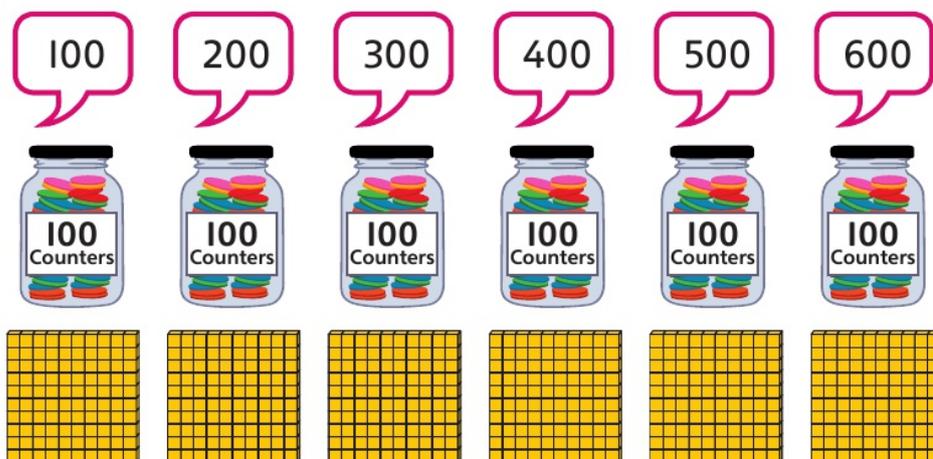
I counted up
in 100s.

Each flat
represents 100.

There are 100 dice in each jar.

There are 300 dice in total.

b)



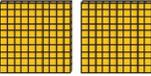
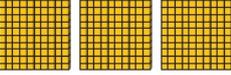
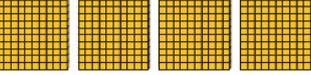
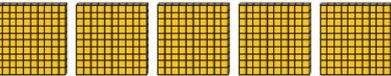
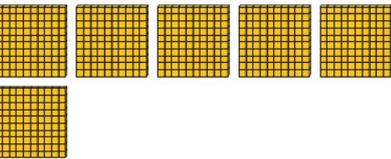
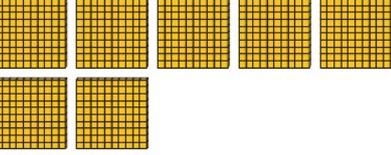
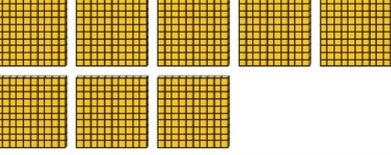
There are 6 jars of 100 counters.

There are 600 counters in total.

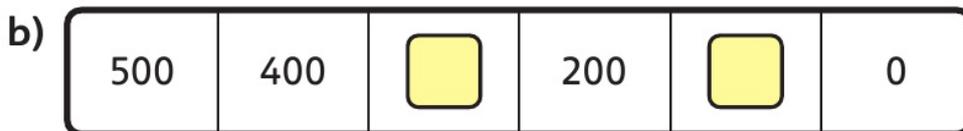
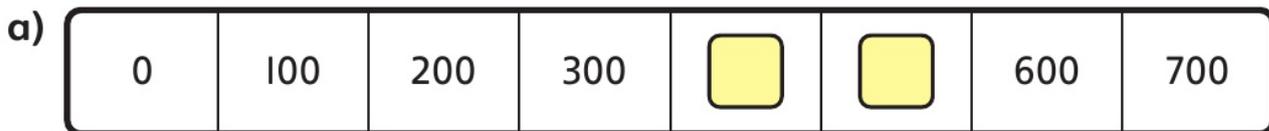
Think together

I Each jar contains 100 counters.

How many counters are there in each row?

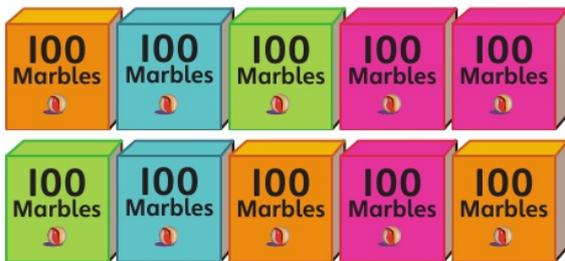
		0	zero
		100	one hundred
		200	two hundred
		300	three hundred
			
			
			
			
			

2 What are the missing numbers?



c) □, 600, □, 800, □

3 How many marbles are there?



Write the number in numerals and words.

There are □ marbles.

There are _____ marbles.

CHALLENGE

I think there is another name for this. I wonder what it is.



When I count in 100s, I know what comes after 9 **hundreds**. It must be 10 hundreds.



Represent numbers to 1,000

Discover



- 1** a) How many bulbs need to be planted?
- b) Make this number with base 10 equipment.
How many 100s, 10s and 1s did you use?

Share

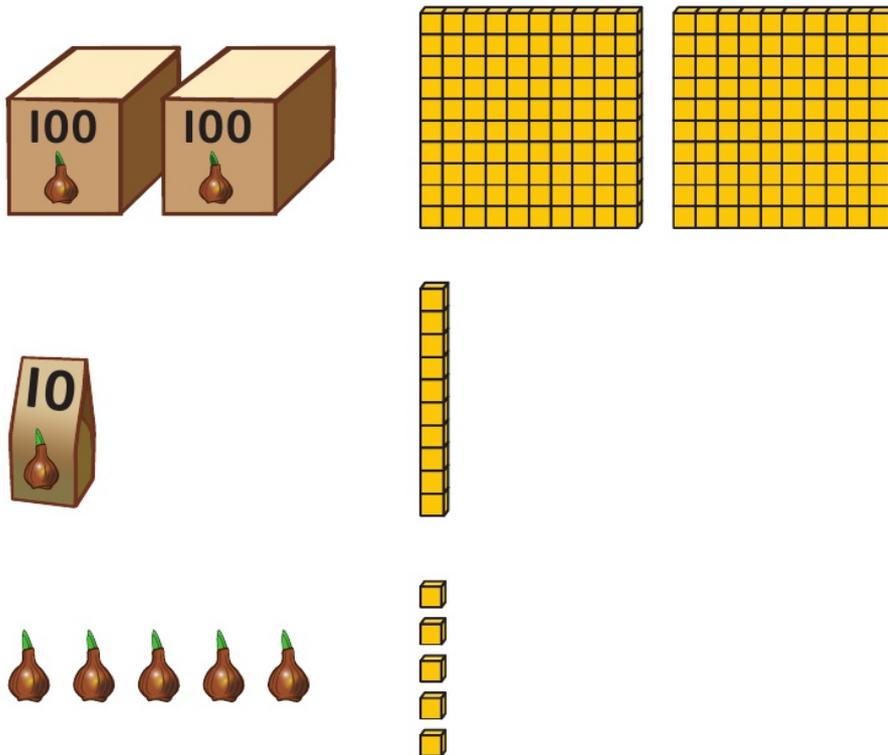
a)

I will start by counting the boxes of 100.



There are 215 bulbs to be planted.

b)



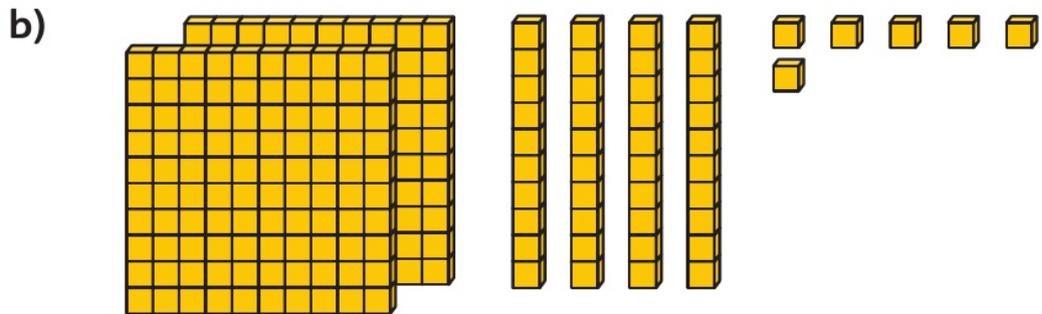
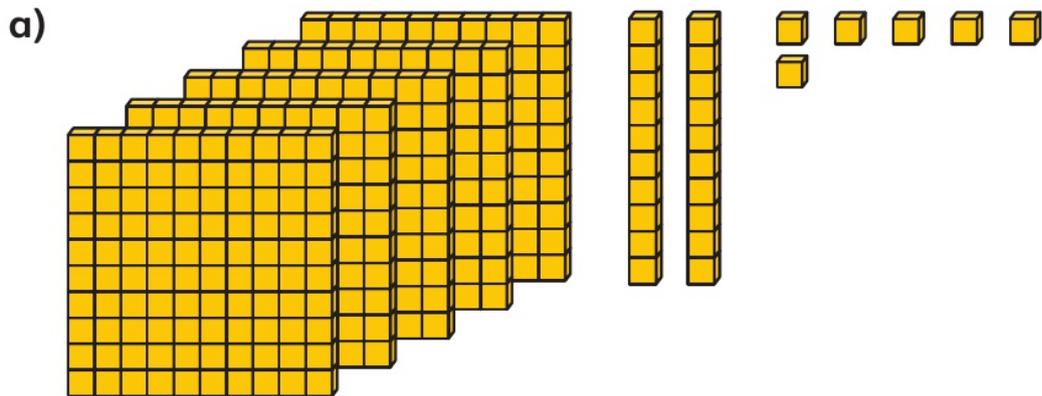
215 has 2 hundreds, 1 ten and 5 ones.

Think together

1 How many sunflower seeds are there?



2 What numbers are represented by this base 10 equipment?



CHALLENGE

3 Here are three digit cards:



Use the cards to make some 3-digit numbers.

- Use base 10 equipment to make your numbers.
- How many 100s does each number have?
- How many 10s does each number have?
- How many 1s does each number have?



I wonder how many numbers I can make with these cards.