

# Stage 1



# Stage 1 – Addition and Subtraction

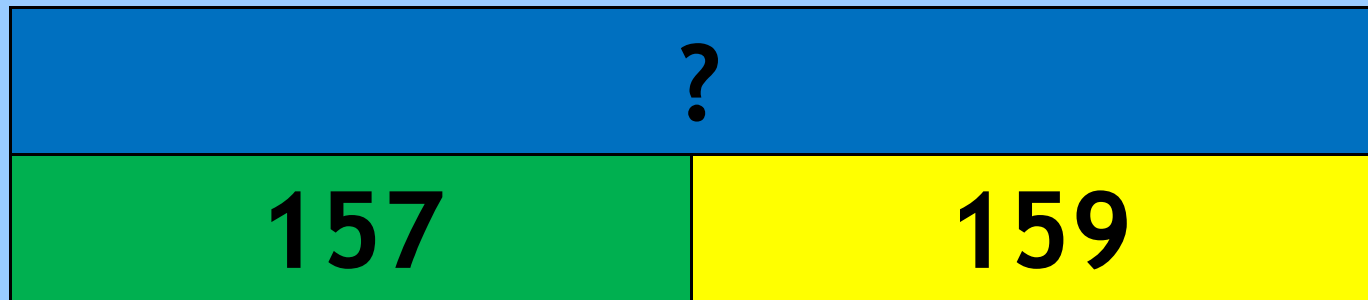
- Add and subtract numbers mentally, including:
  - a three-digit number and ones
  - a three-digit number and tens
  - a three-digit number and hundreds.
- Estimate the answer to a calculation and use inverse operations to check answer.
- Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.

5	
3	?

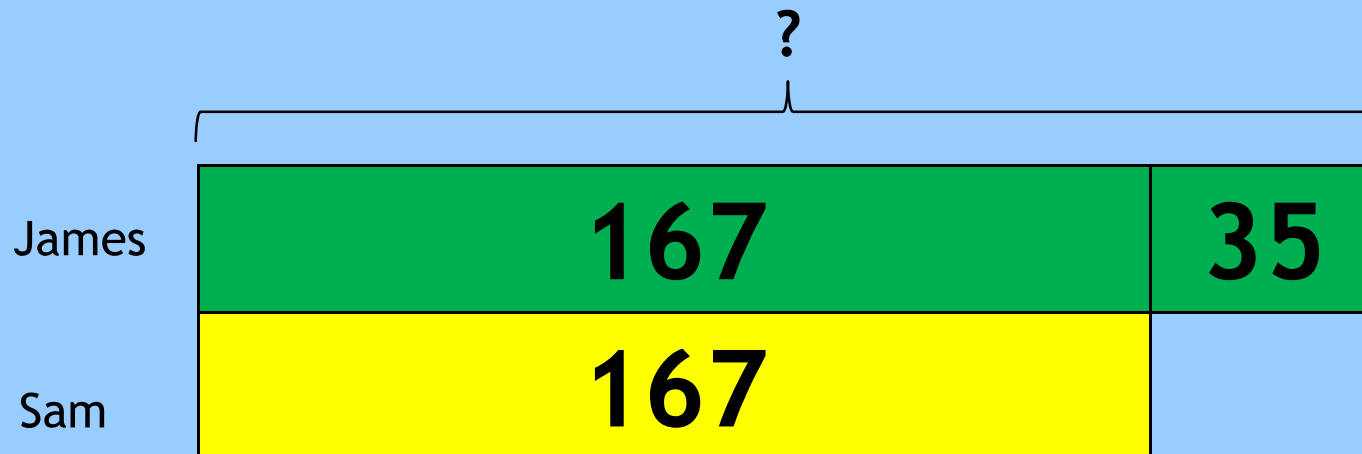


# Stage 1 - Addition

In a cricket match, James' team score 157 runs in the first innings and 159 in the second innings. How many runs did they score in total?

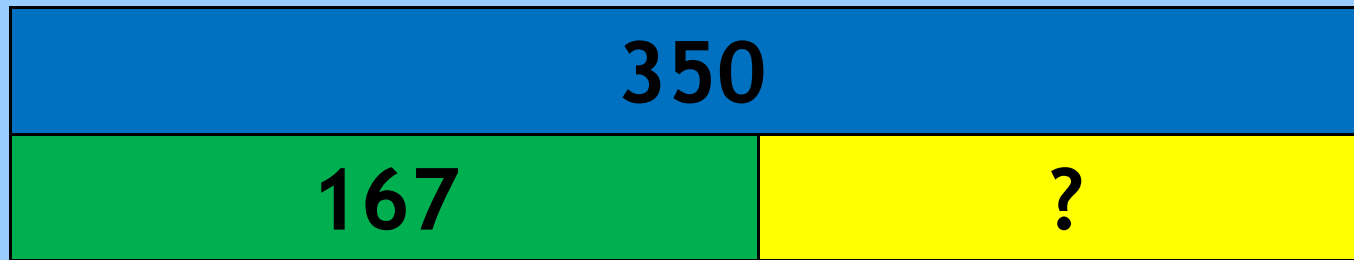


James scored 35 more points than Sam. Sam scored 167 points in his game. How many points did James score?

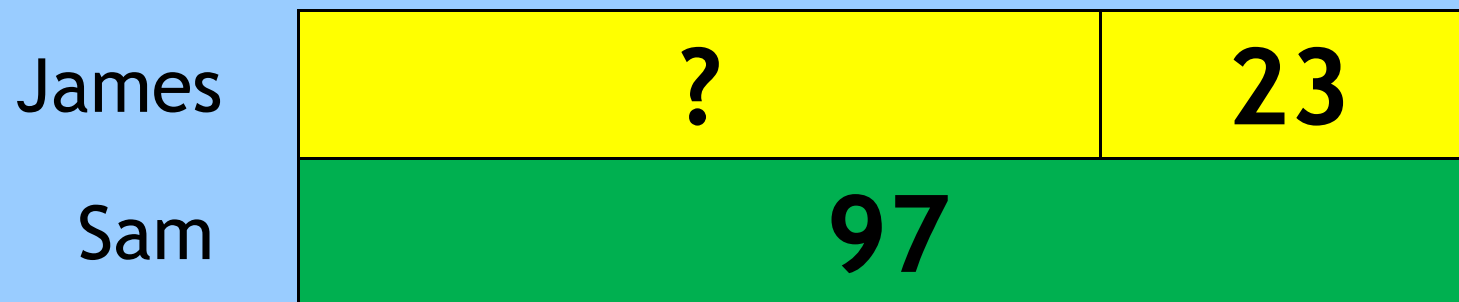


# Stage 1 - Subtraction

There are 350 pages in Amber's book. On Tuesday, she reads 167 pages of her book. On Wednesday, she reads the rest of the book. How many pages did she read on Wednesday?



James has collected 23 fewer football stickers than Sam. Sam has collected 97. How many football stickers has James collected?



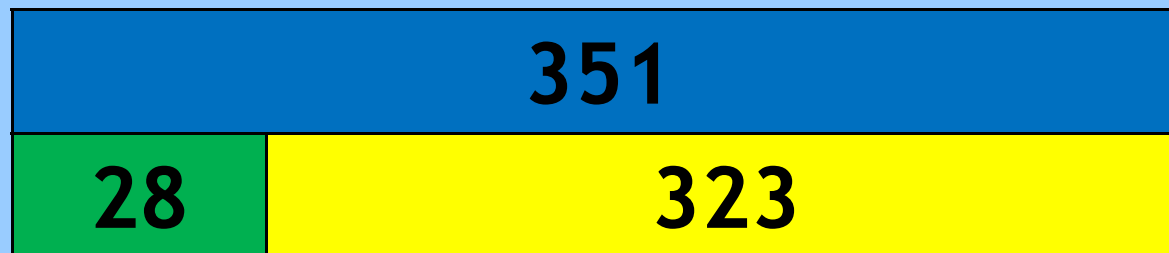
# Stage 1 - Subtraction

The bag of flour weighs 750g. Nicola uses 600g of flour. How much flour is left?



## Stage 1 – Check answers using the inverse

For the calculation  $323 + 28$ , Amber undertakes the calculation  $351 - 323$ . Can you explain why she chose to do this?



# Stage 1 - Multi-Step problems

Gill has £2 pocket money. She spends 70p on a comic and 50p on a bar of chocolate. How much change should she get?

200p		
70p	50p	?

Complete this table:

Year group	Number of children
3	32
4	33
5	?
6	27
Total	120

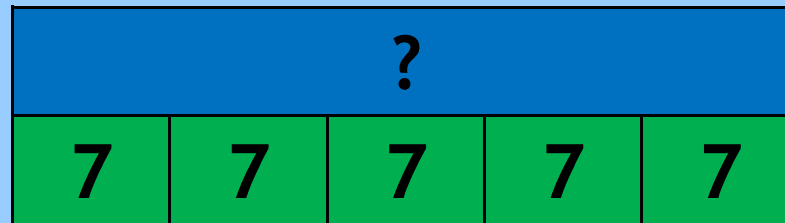
120			
32	33	27	?



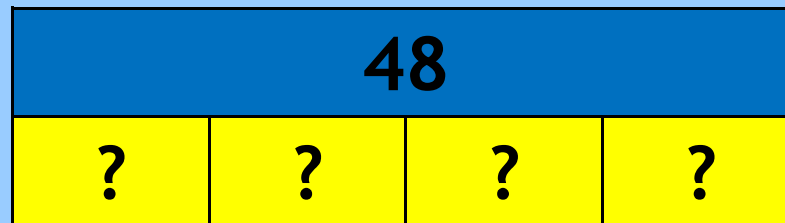
# Stage 1 – Multiplication and Division

- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written method.

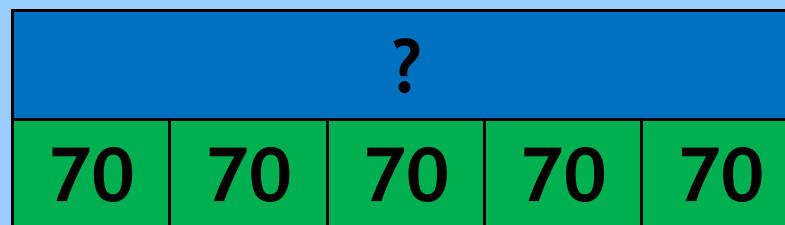
$$5 \times 7 = \square$$



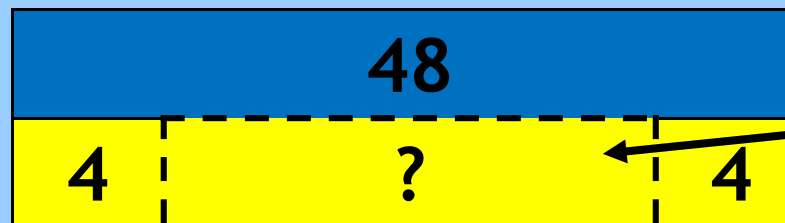
$$4 \times \square = 48$$



$$\square \div 5 = 70$$



$$48 \div \square = 4$$

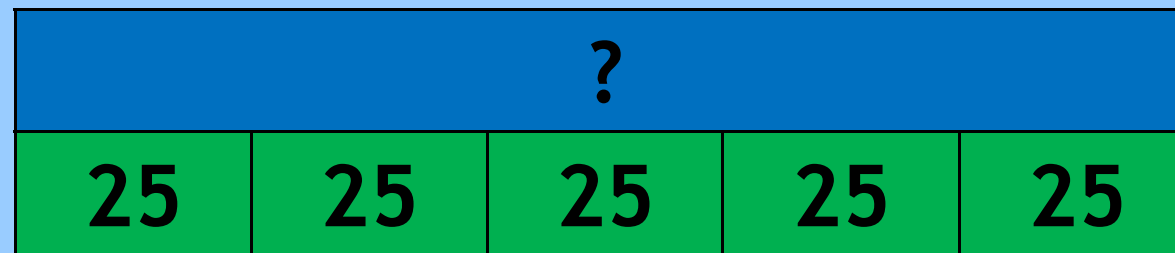


**Note:**  
You do not necessarily need to draw out all of the boxes of 4 here, as long as the intention is clear.

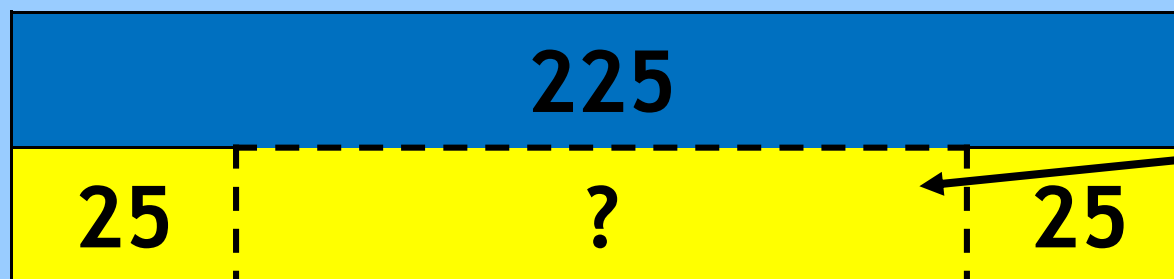
# Stage 1 - Measures

One length of the swimming pool is 25 metres.

a) Rachel swims five lengths of the pool. How far does Rachel swim altogether?



b) Sam swims 225m in the pool. How many lengths does he swim?



**Note:** You do not necessarily need to draw out all of the boxes of 25 here, as long as the intention is clear.



# Stage 1 - Measures

**Time:** How many hours are there in two and a half days?

1 day	1 day	1 day
24 hours	24 hours	12 hours

?

**Money:** I had one pound. I bought two cartons of drink and received 30p change. How much did each carton cost?

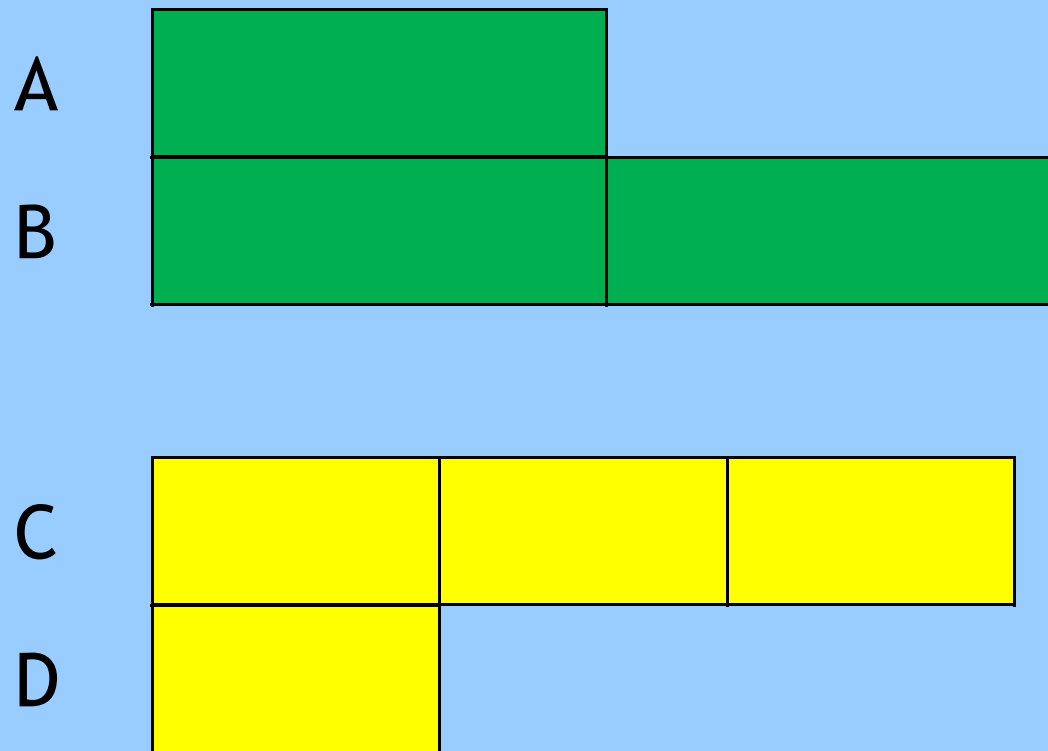
100p		
?	?	30p



# Stage 1 – Multiplication and Division

- Solve problems including positive integer scaling problems and correspondence problems in which  $n$  objects are connected to  $m$  objects.

At this stage, focus upon the multiplicative relationship between the bars.



Provide a speaking frame if required, for example:

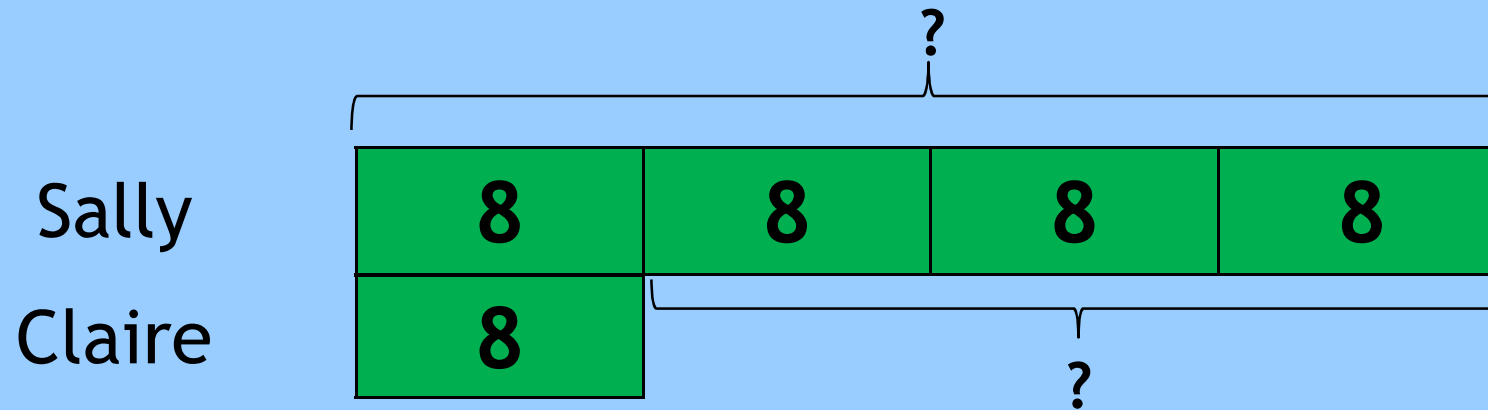
.... is twice as many as ...

... is three times as many as ...

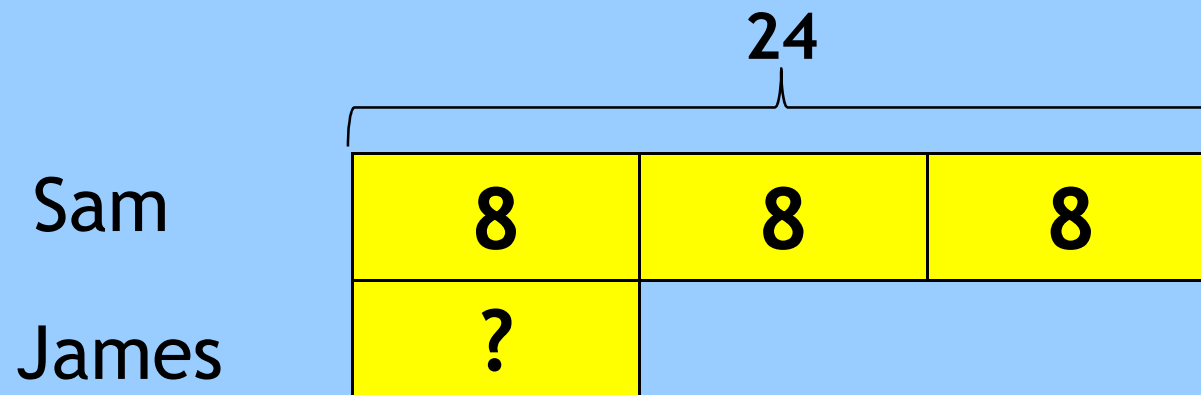


# Stage 1 – Scaling

Claire builds a tower that is 8 cubes tall. Sally builds a tower that is 4 times as tall. How tall is Sally's tower? How much smaller is Claire's tower?

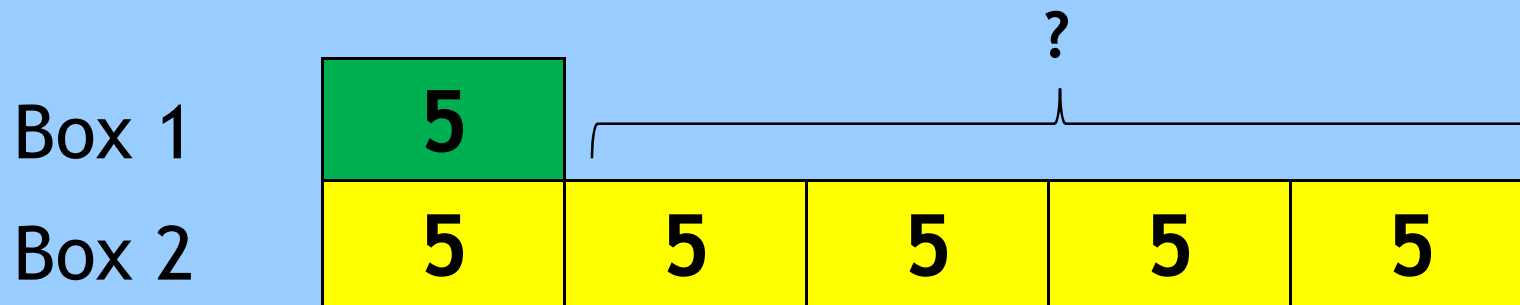


Sam's ribbon is three times as long as James's ribbon. Sam's ribbon is 24cm long. How long is James's ribbon?

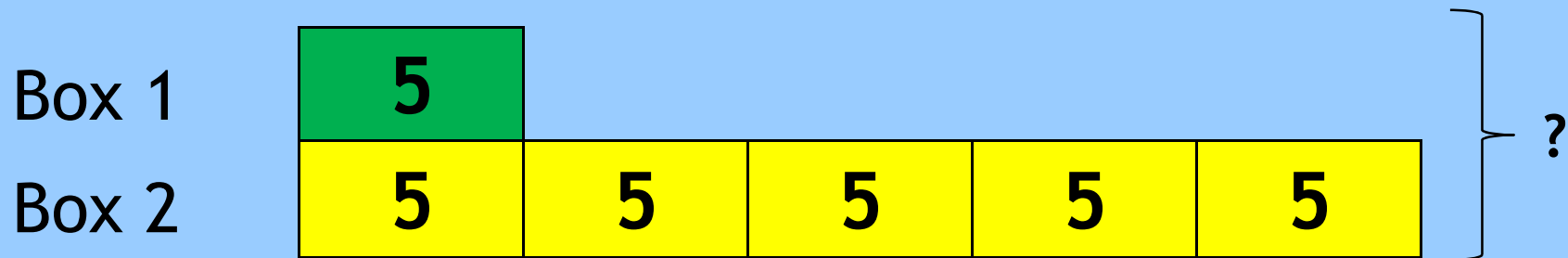


# Stage 1 – Scaling

Leigh is helping in the school library. She is packing books into two boxes. The first box has 5 books in it. The second box has five times as many books in it as the first box has. How many more books does the second box hold than the first?



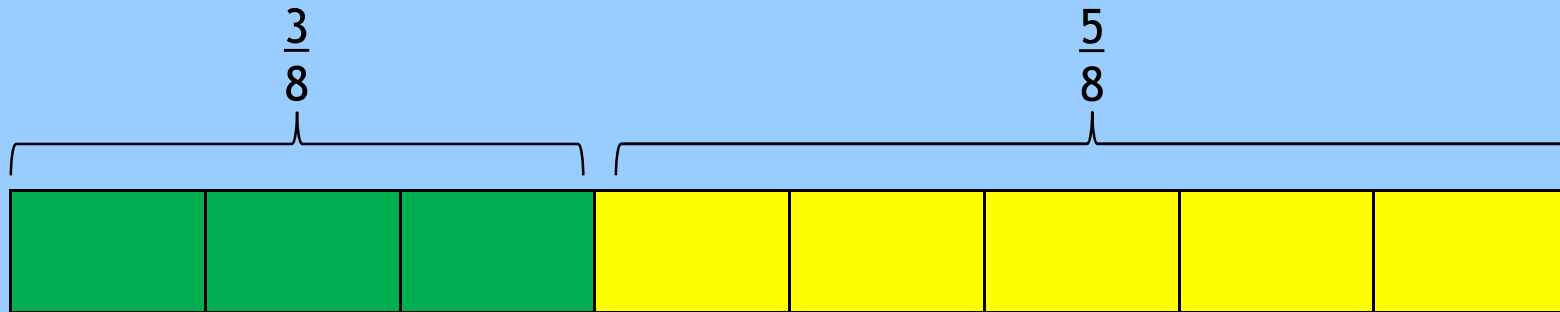
How many books in total have been packed into the two boxes?



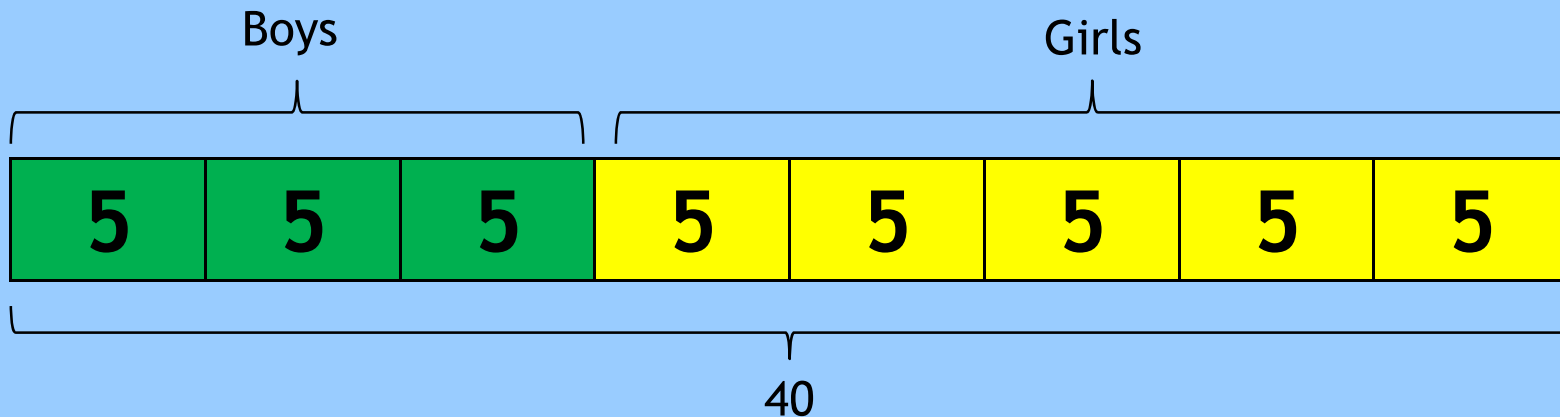
# Stage 1 – Fractions

- Recognise, find and write fractions of a discrete set of objects; unit fractions and non-unit fractions with small denominators.

$\frac{3}{8}$  of a class are boys. What fraction of the class are girls?

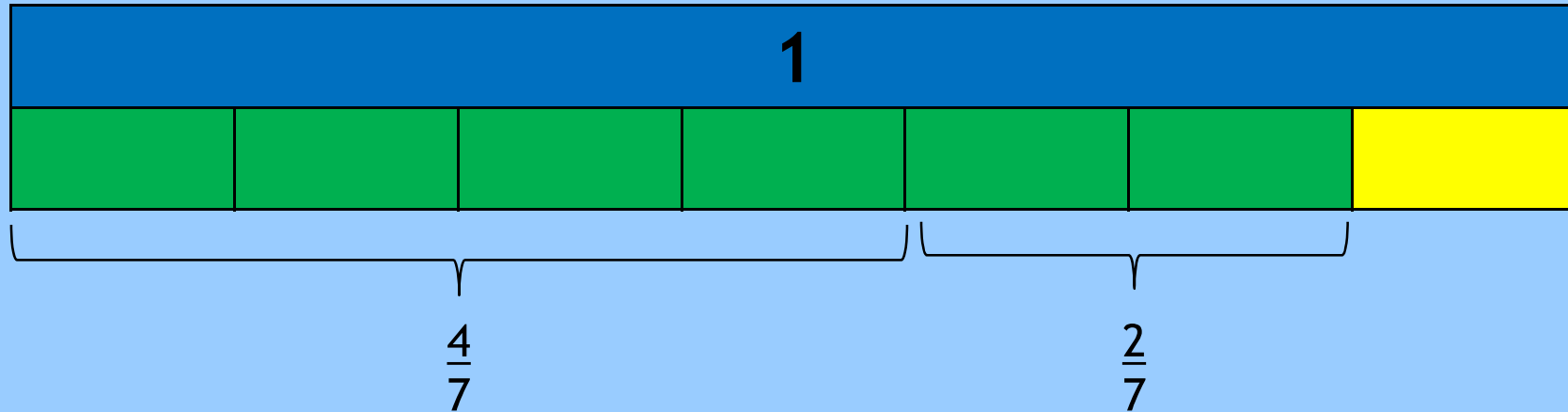


If there are 40 children in the class, how many boys are there?

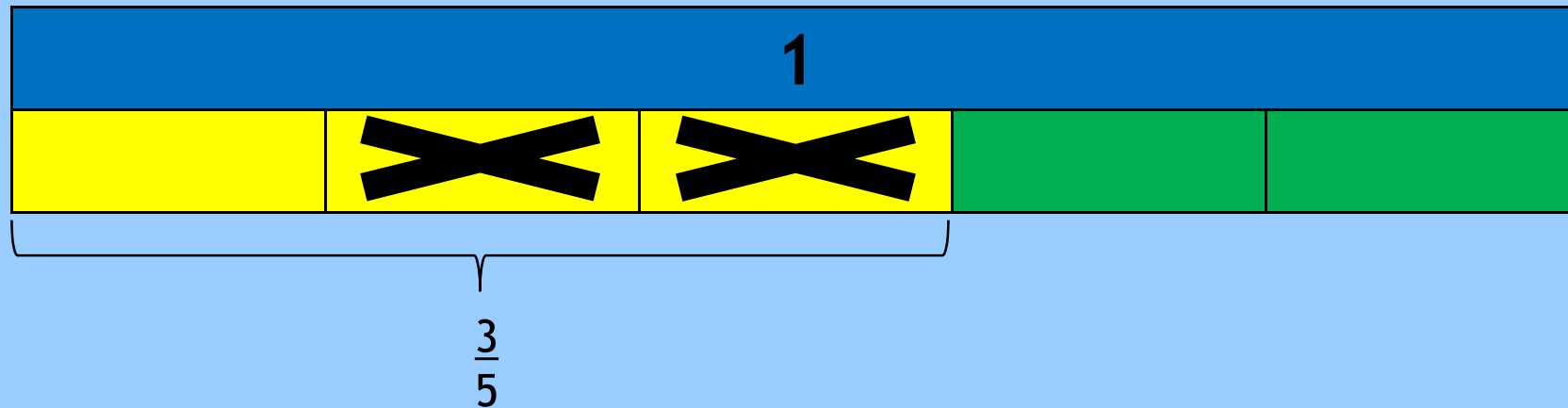


# Stage 1 – Fractions

- Add and subtract fractions with the same denominator within one whole.



$\frac{4}{7}$  add  $\frac{2}{7}$  is equal to  $\frac{6}{7}$  of the whole



$\frac{3}{5}$  take away  $\frac{2}{5}$  is equal to  $\frac{1}{5}$  of the whole

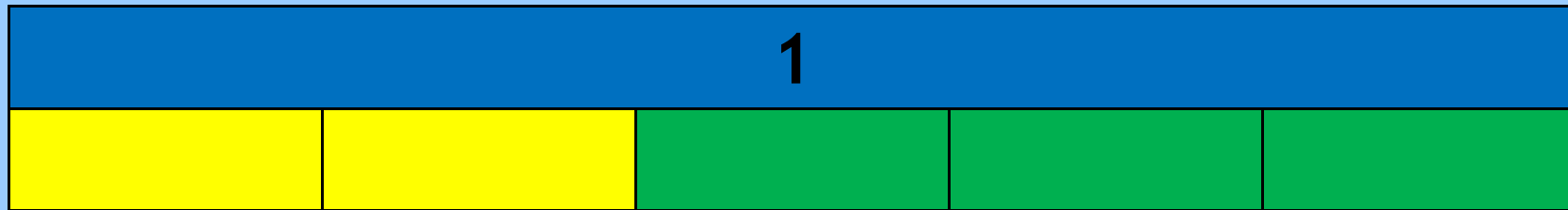


# Stage 1 – Fractions

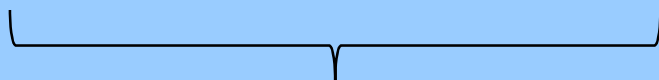
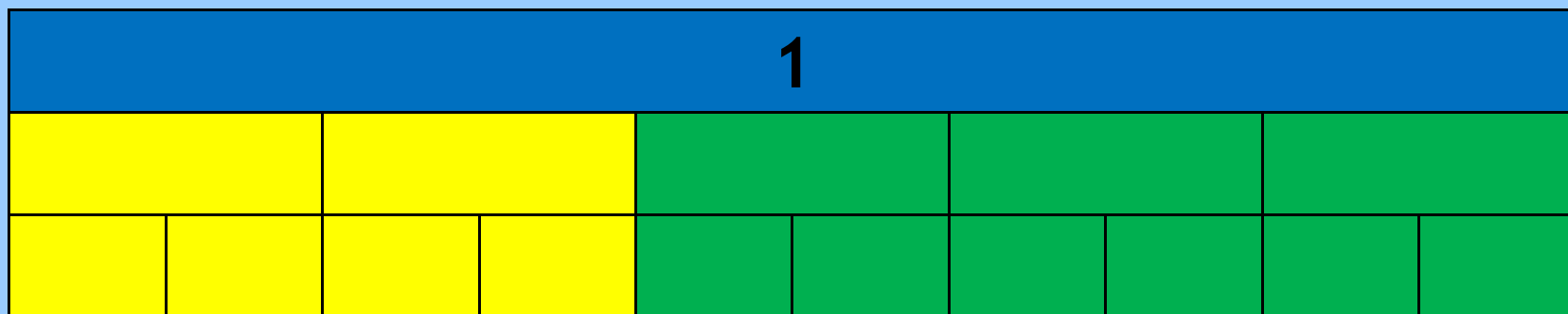
- Recognise and show, using diagrams, equivalent fractions with small denominators.

Children could explore this with Cuisenaire rods first and then with bar models.

What does  $\frac{2}{5}$  look like as a bar model?



Let's split each of the fifths into two equal pieces. What does that look like?



$$\frac{2}{5} = \frac{4}{10}$$

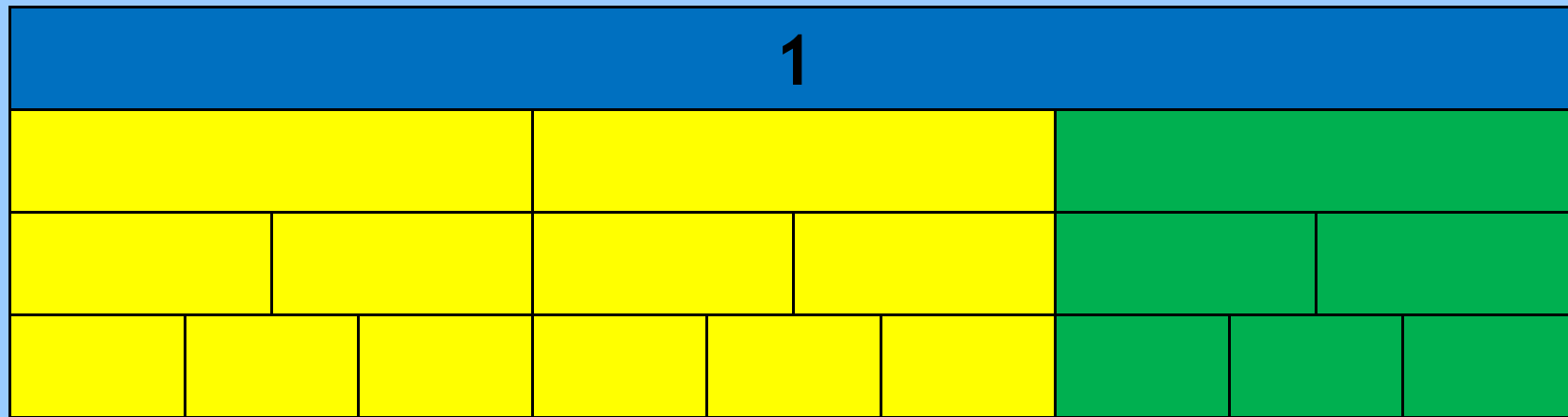


# Stage 1 – Fractions

- Recognise and show, using diagrams, equivalent fractions with small denominators.

Children could explore this with Cuisenaire rods first and then with bar models.

Find equivalent fractions to  $\frac{2}{3}$ .



$$\frac{2}{3} = \frac{4}{6} = \frac{3}{9}$$

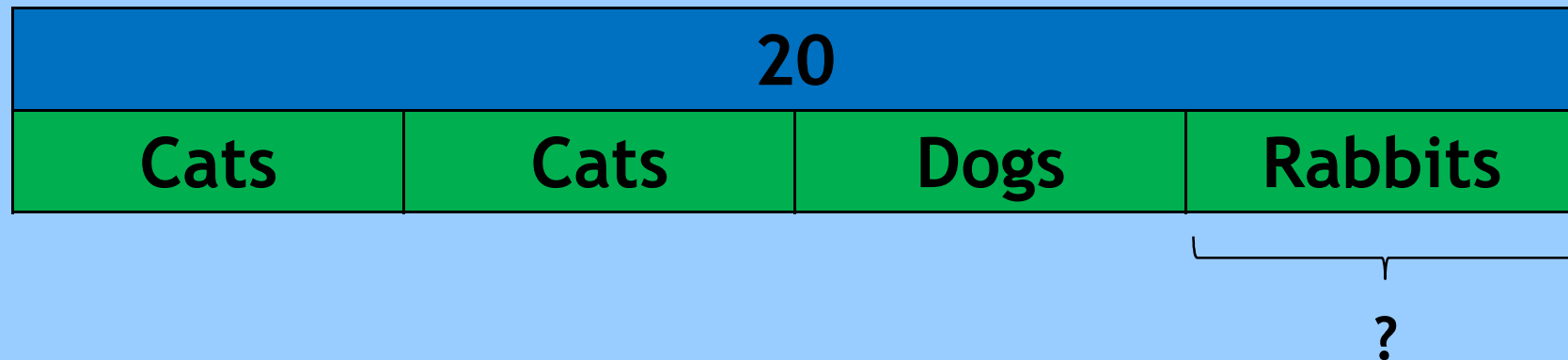




# Stage 1 – Combining

- Solve problems that involve all of the above.

Sally has 20 stickers on her page. One quarter of them are dog stickers. One half of them are cat stickers. The rest are rabbit stickers. How many rabbit stickers are on the page?



What is the larger amount, one third of £60 or one quarter of £80?

