Bar Modelling

Have a go at the questions on your table….

What did you find out?

- Bar modelling is NOT a strategy but simply a tool to aid children to see the answer
- Bar model will not always be appropriate but when it does work it relates back to one of our principals- Representation
- Bar modelling also supports the ethos that maths is not about the answer but explaining how we got there (parent workshops)
- SATS

Today we will look at:

- Introducing Bar Modelling younger children.
- Using modelling to understand curriculum content.
- Using bar modelling to solve challenging problems.

Pictorial understanding

- Why do it?

- The ability to solve a word problem requires more than procedural skills such as performing computations and conceptual understanding.

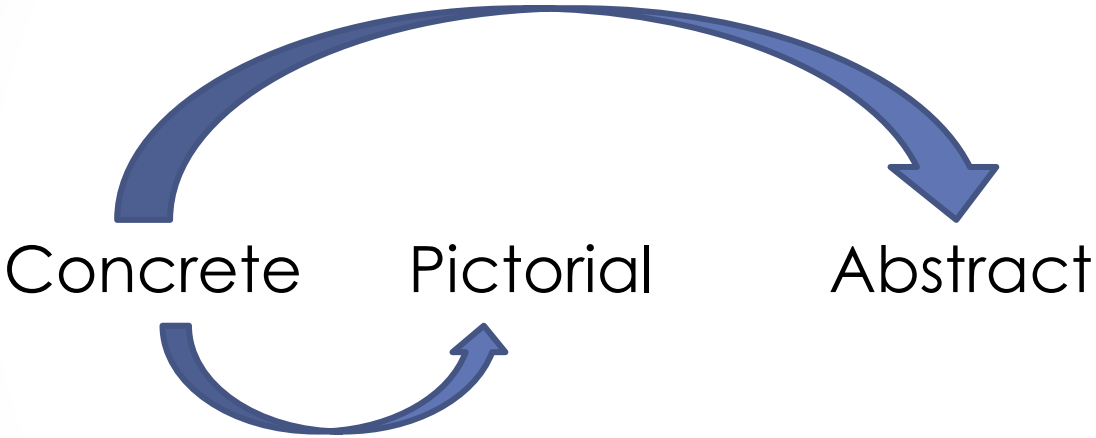
- Representations often include a diagram

- This allows students to:

-Reflect
-Modify
-Link

Old Curriculum…

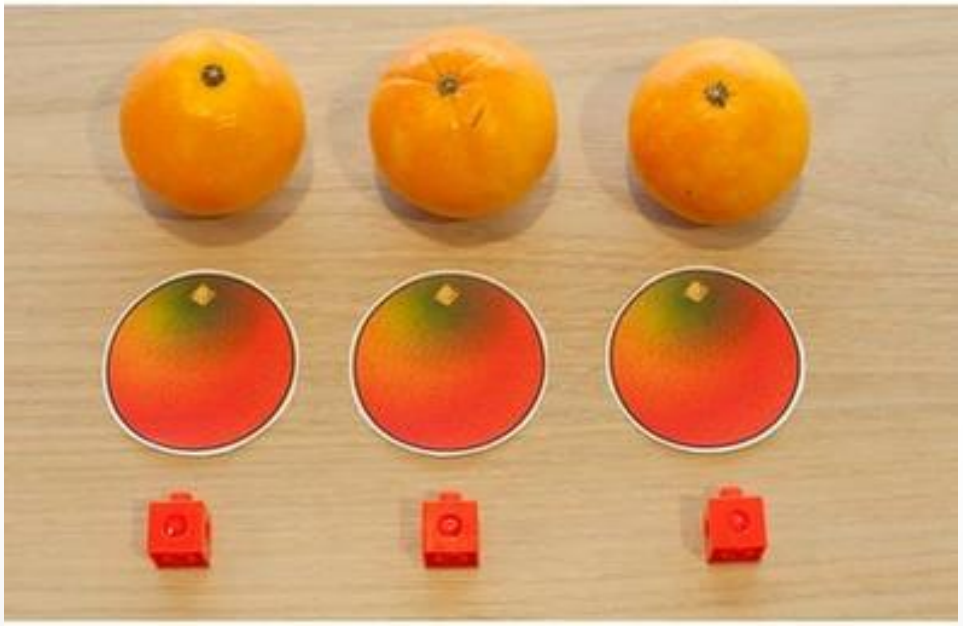
Year 3



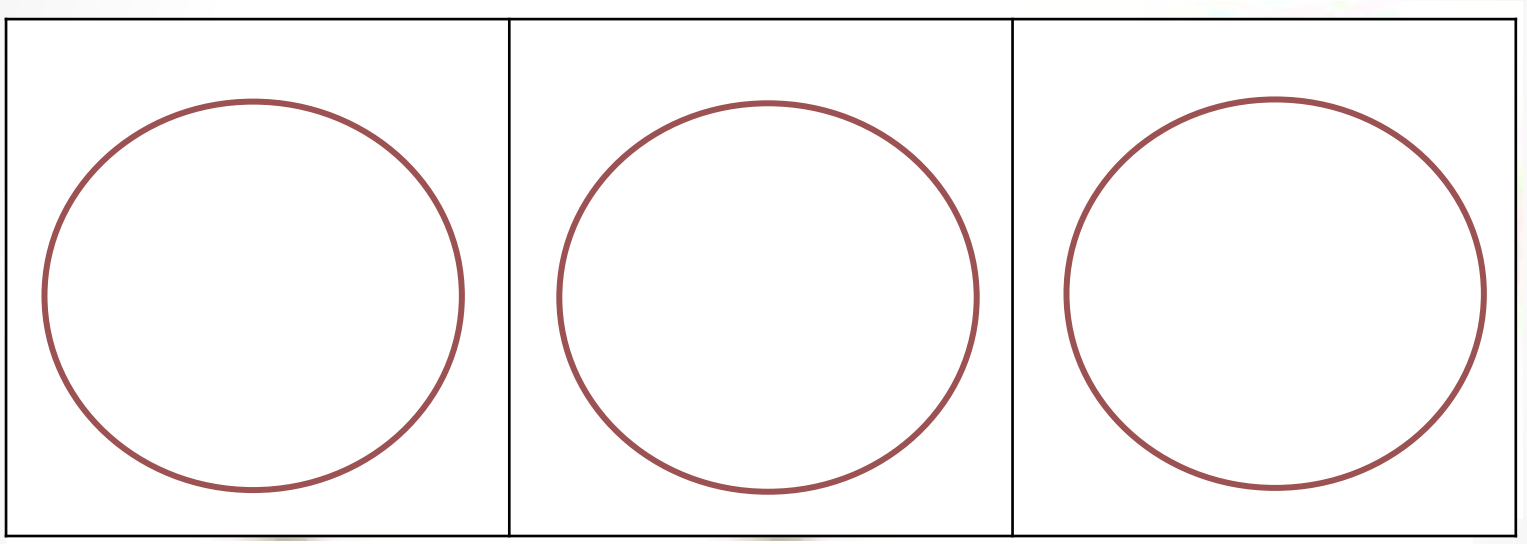
Bar Model

Early years and LKS1

- To help our children understand how to represent difficult problems as they work their way up the school, bar modelling needs to be explored during EYFS and year one through real objects….



Introducing Bar Models in EYFS



Remember…

Limit the distracting factors

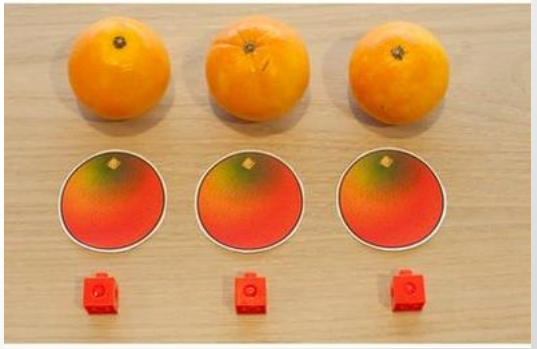
Use real life objects with same colours to begin

Containing

Place in a basket or bowl

Lining up objects in a row

Children start by counting familiar things using blocks or cut-out pictures they can physically line up in a row. For instance counting pieces of fruit, Lego blocks, or people in the room.



Consolidating

Don't move on until the are ready!

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Steps in Bar Modelling

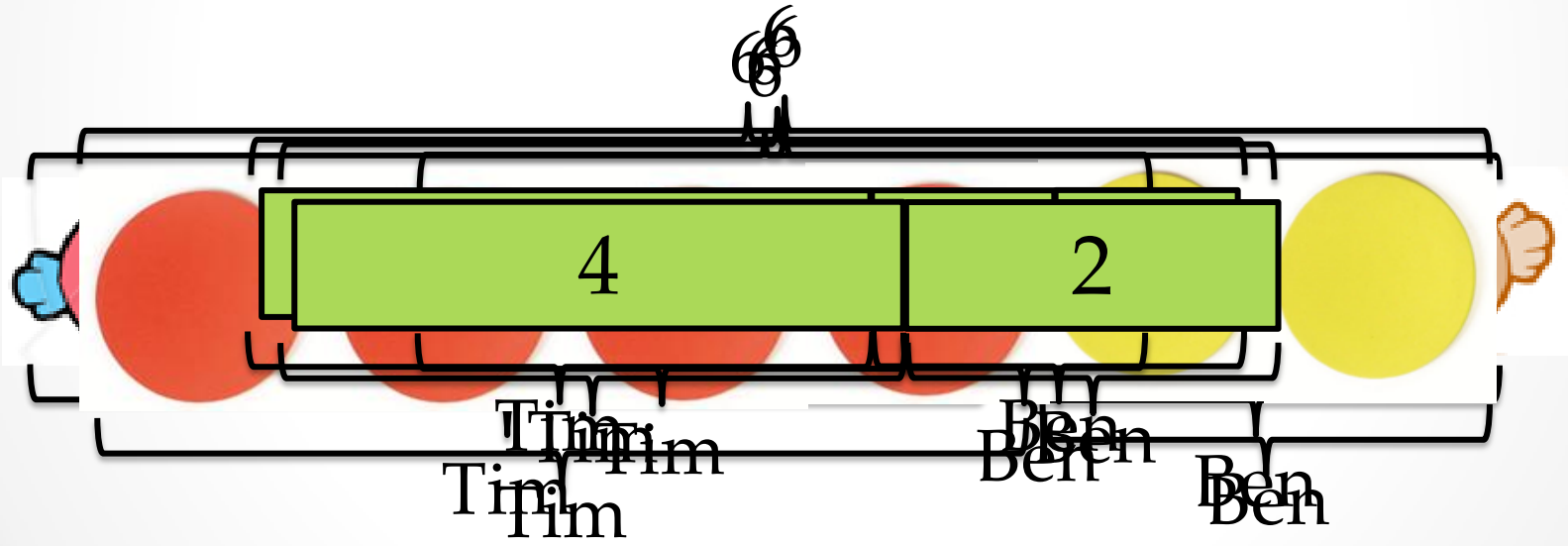
- **L** abel
- **D** ata (What is known)
- **Q** uesstion (Unknown)
- **E** quation
- **A** nswer

KS1 bar modelling

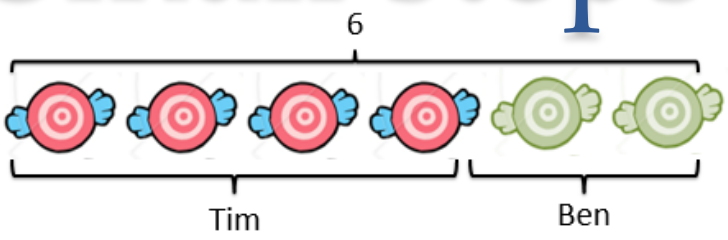
Peter has 5 toy cars and Jane has 3 toy cars.
How many toy cars do they have altogether?

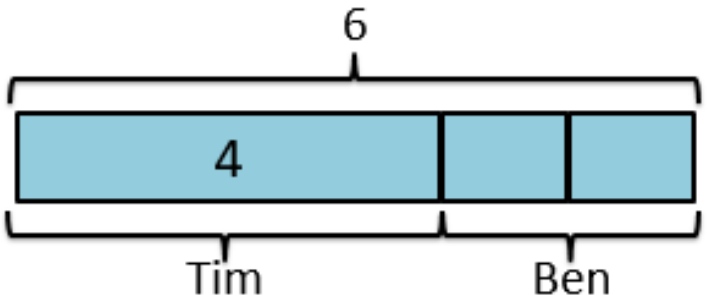
KS1 Bar Modelling

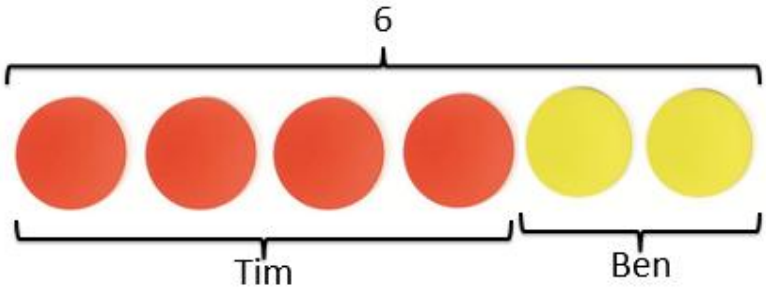
Tim has 4 sweets and Ben has 2 sweets.
How many sweets do they have altogether?

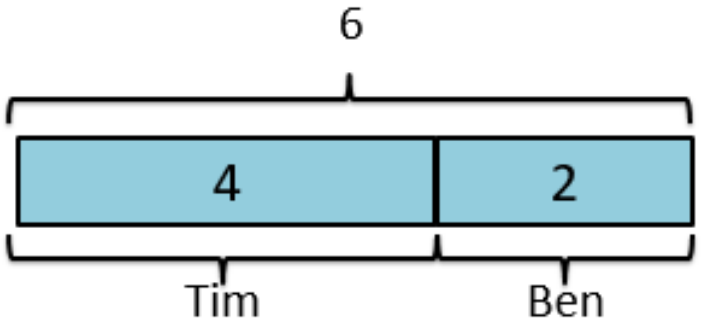


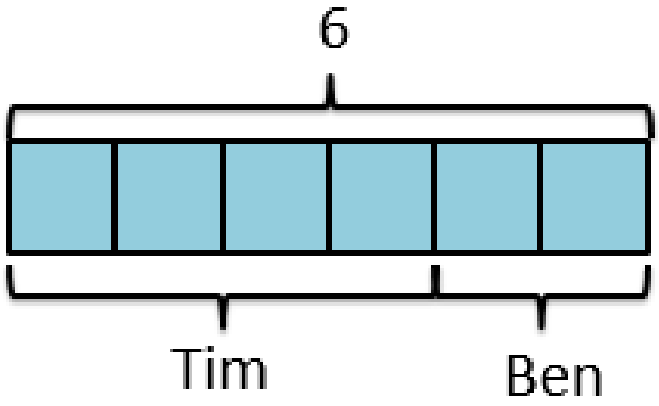
Small steps











$4 + 2 = 6$

Steps in Bar Modelling

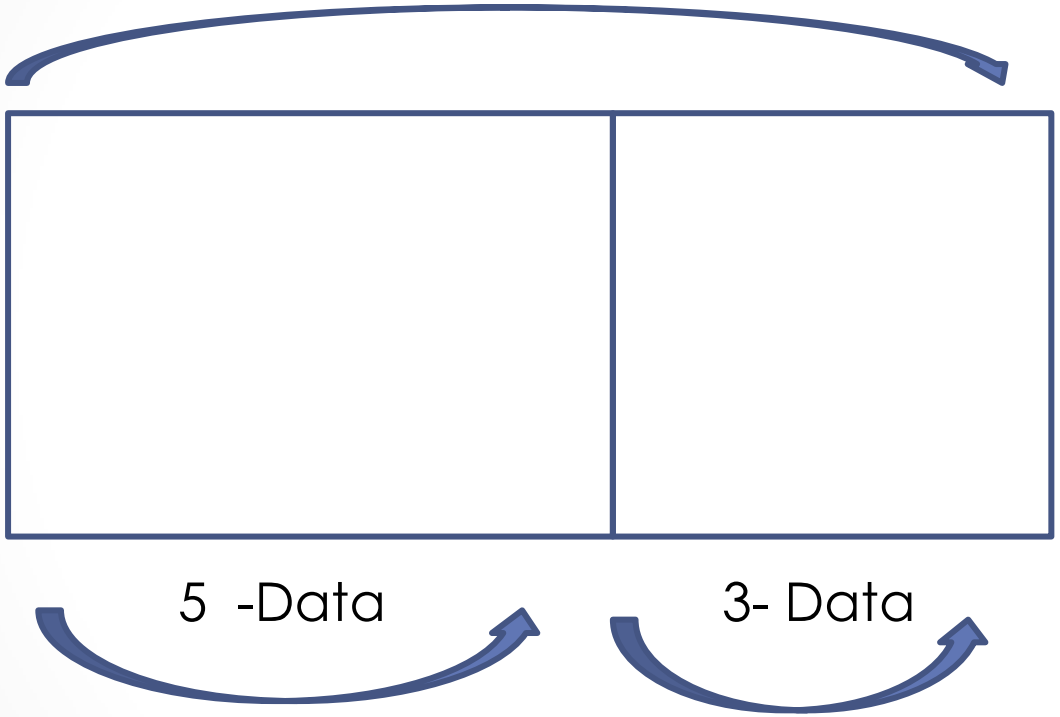
- **L** abel
- **D** ata (What is known)
- **Q** uesstion (Unknown)
- **E** quation
- **A** nswer

Have a go…

- Bobo the bear had 6 red hats and 2 blue hats- How many did he have all together?

Did you get them all?

- ?- Unknown



Cubes (label)

- 5 -Data
- 3- Data

5+3= 8
3+5=8 Equation

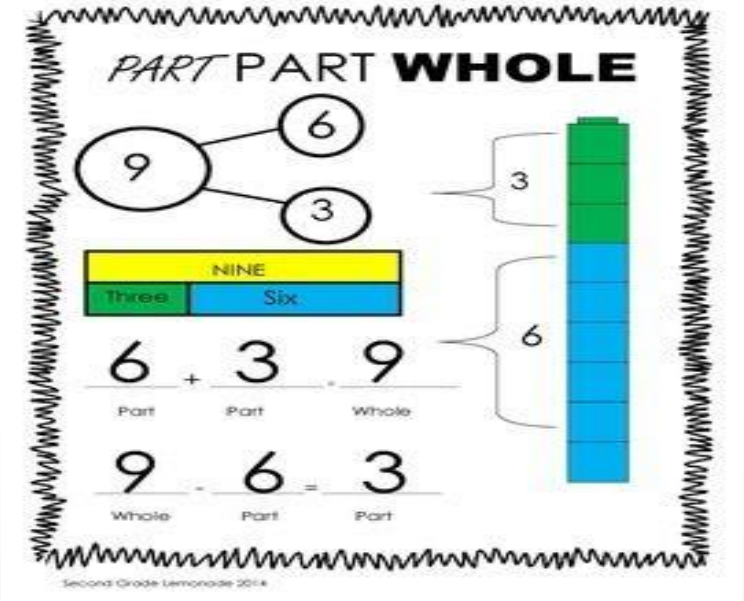
Pictorial maths in literacy

KS2

Knowledge of numbers is Key to the Bar model

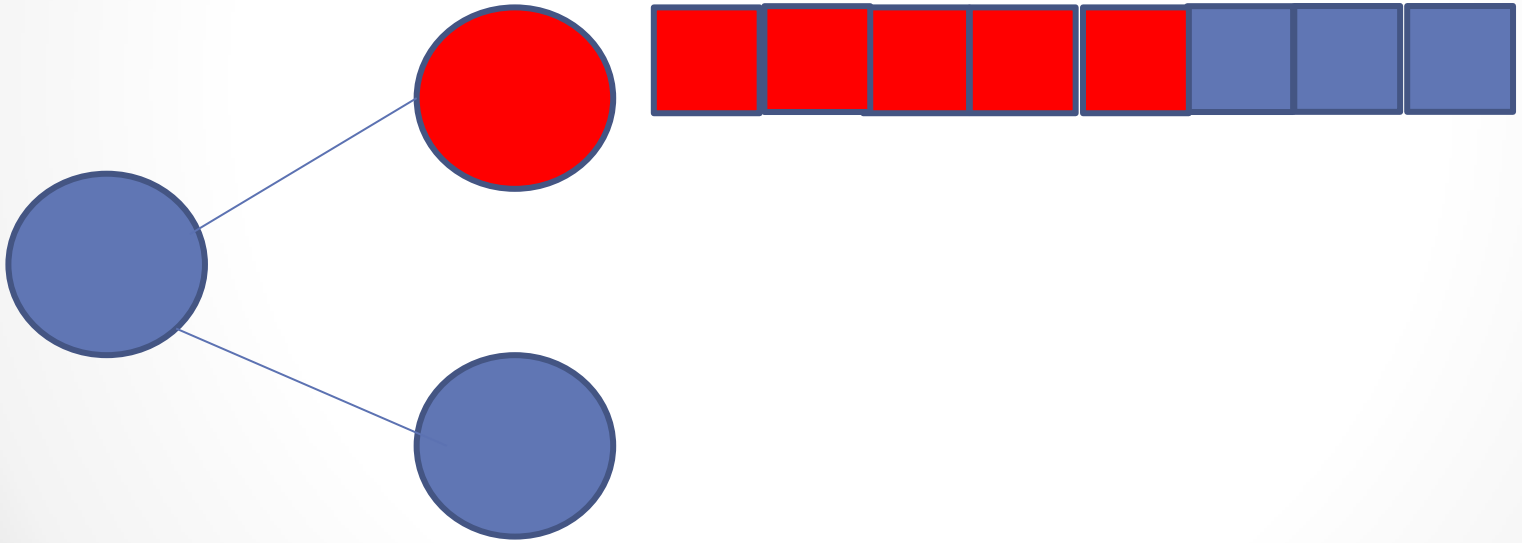
Part whole

Development of this will be stronger after programme has been run for a few years but must be practiced!



Micro steps Yr3-6

- Jenny has 5 red cubes and 3 blue cubes. How many does she have all together?

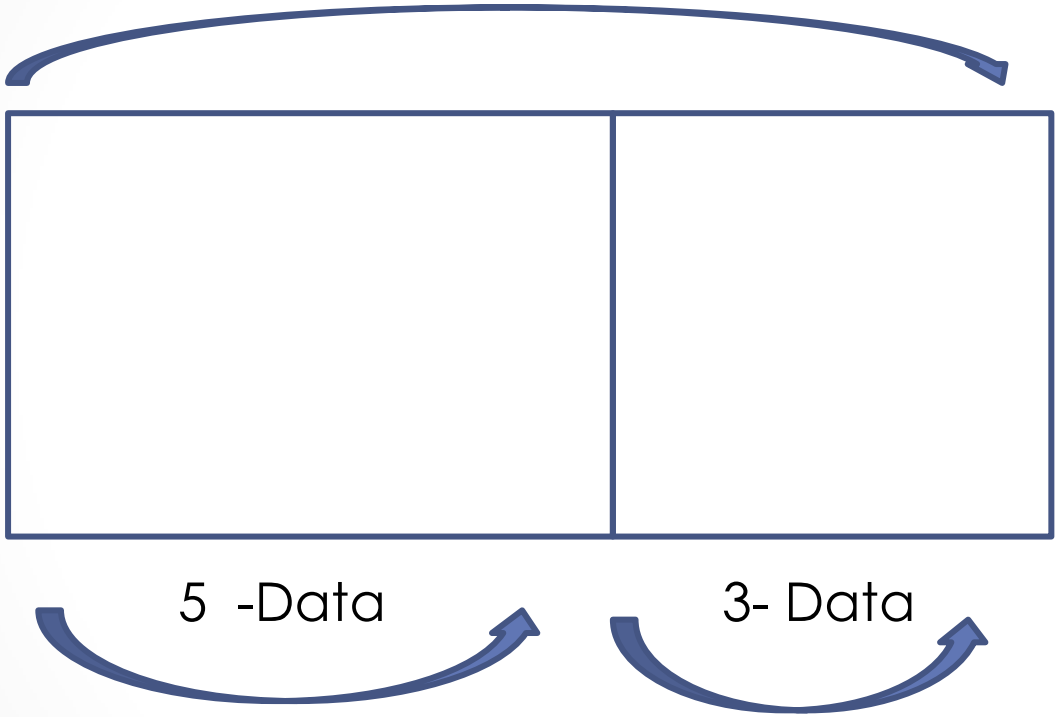


Steps in Bar Modelling

- **L** abel
- **D** ata (What is known)
- **Q** uestion (Unknown)
- **E** quation
- **A** nswer

Proportion

- ?- Unknown



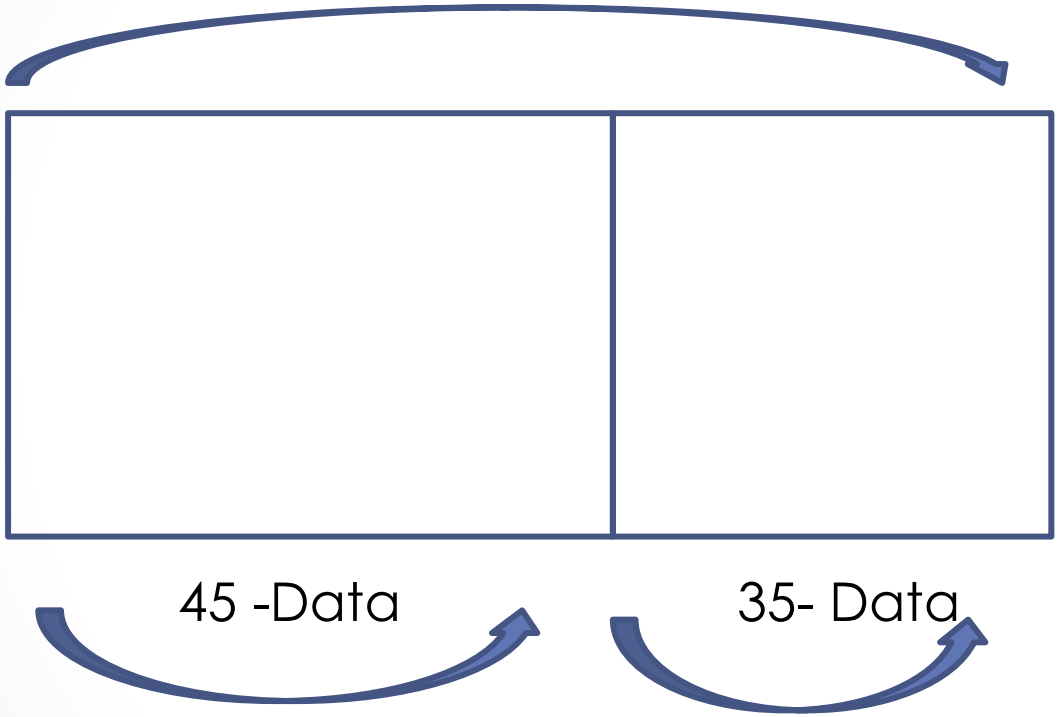
Cubes (label)

- 5 -Data
- 3- Data

5+3= 8
3+5=8 Equation

Sam has 45 stamps. His Father gives him 35 more. How many does he have now?

- ?- Unknown



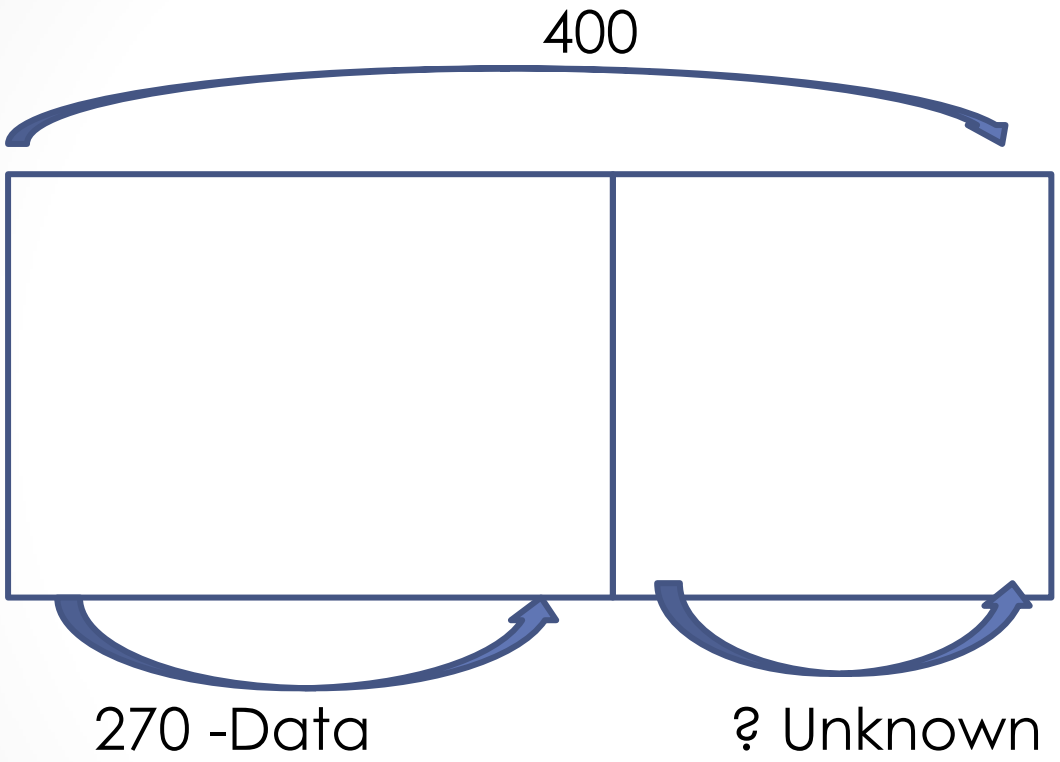
45+35= 80
35+45=80

Equation

Answer: Sam has 80 stamps

Hannah baked 400 tarts. She gave 270 away.

How many does she have now?

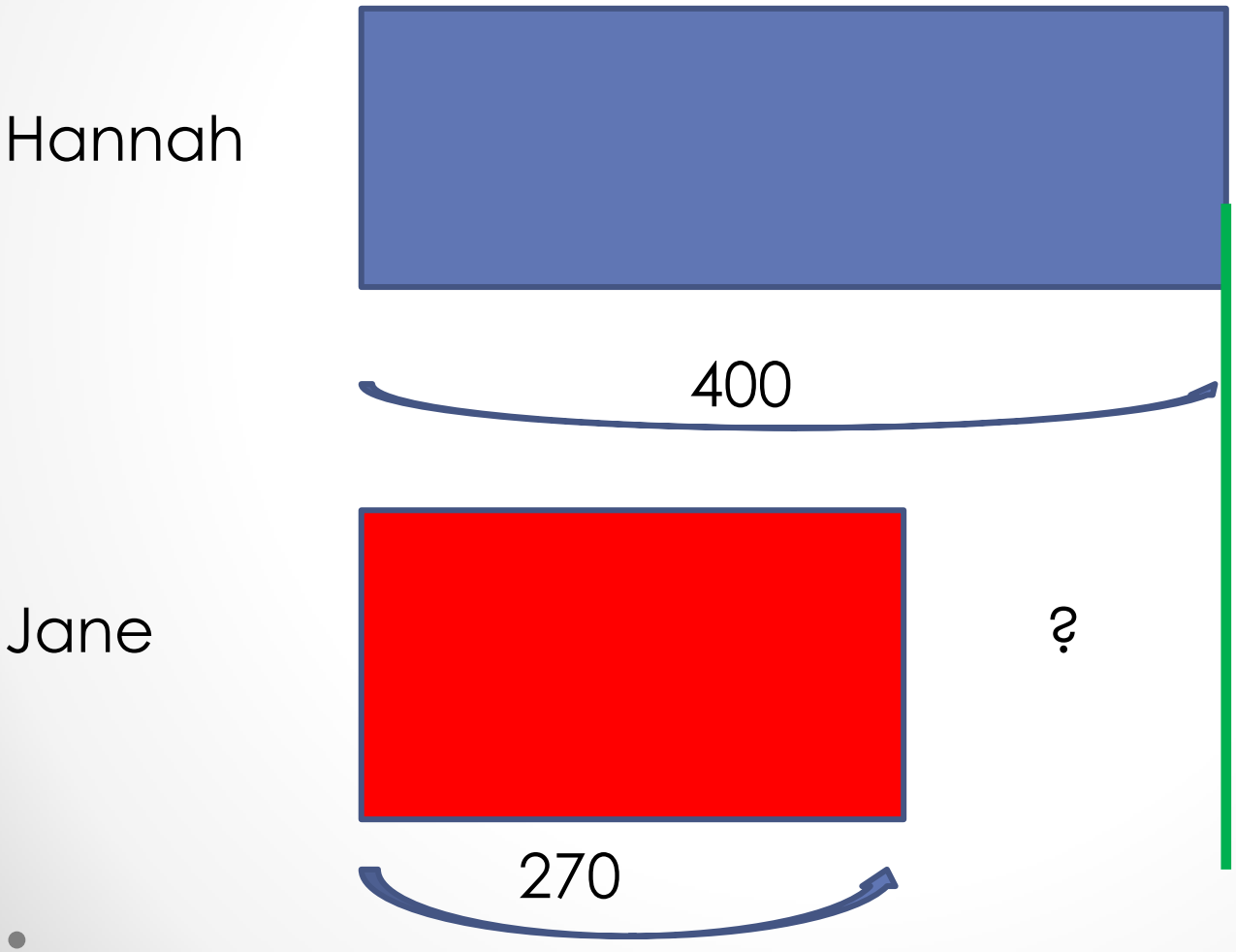
- 

- 400- 270+ ___
- __+ 270= 400

Comparisons-What is the same? What is different?

Hannah made 400 tarts, Jane made 270 tarts- what is the difference?

Hannah made 400 tarts, Jane made 270 tarts- what is the difference?



In Focus

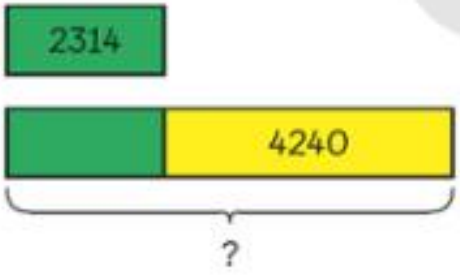
saved £2314.

saved £4240 more than saved.

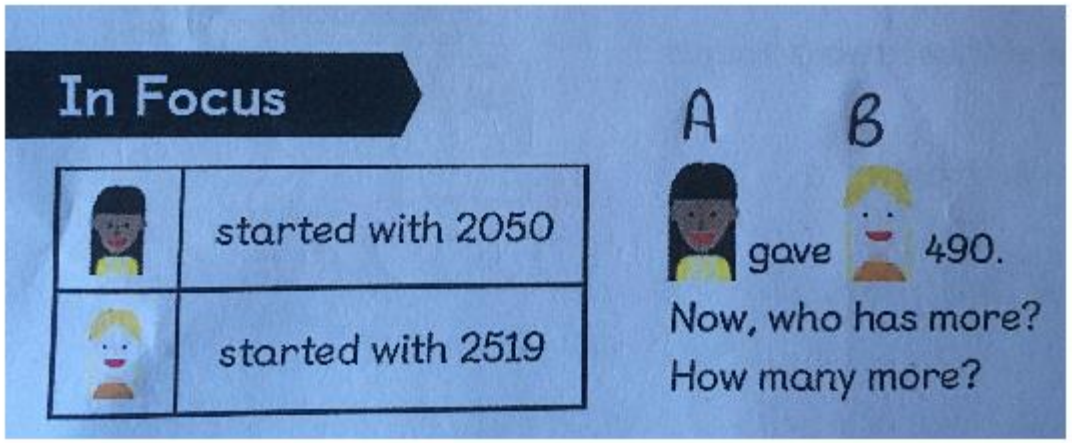
How much did save?

Let's Learn

1



We need to find the sum of 2314 and 4240.



2050

A

2050- 490= 1560

2519

490

B

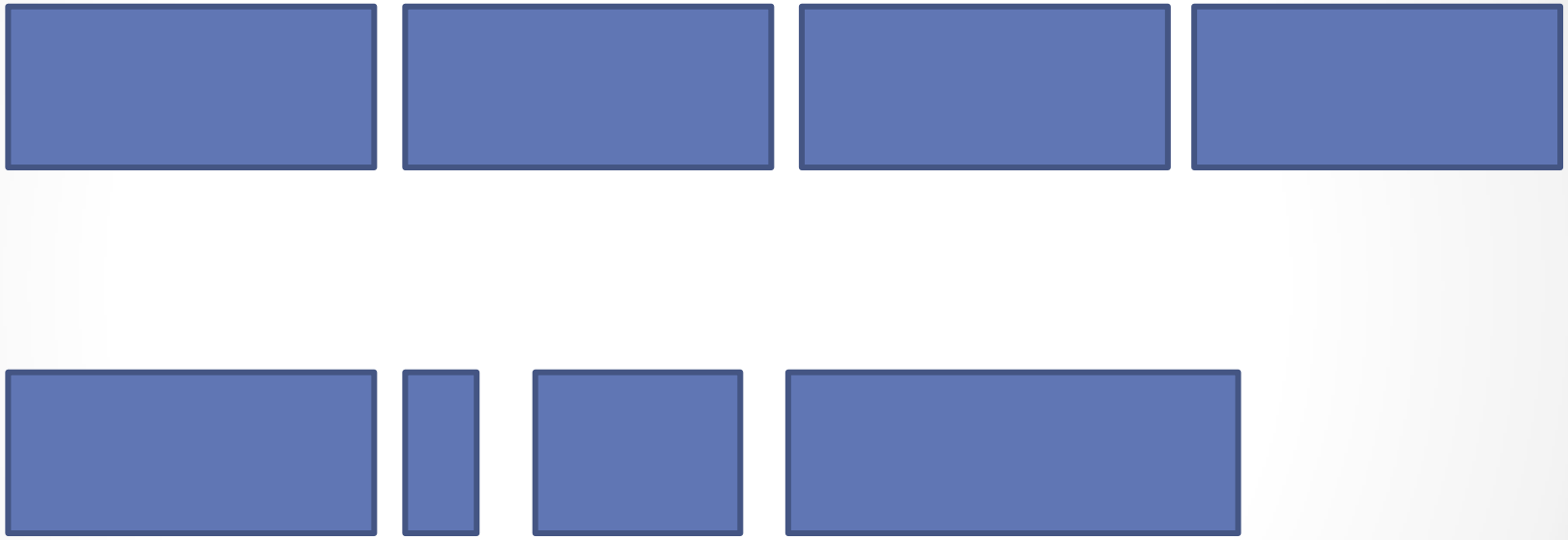
519+490=3009

3009-1560

Remember the sentence…

B has 449 more than A

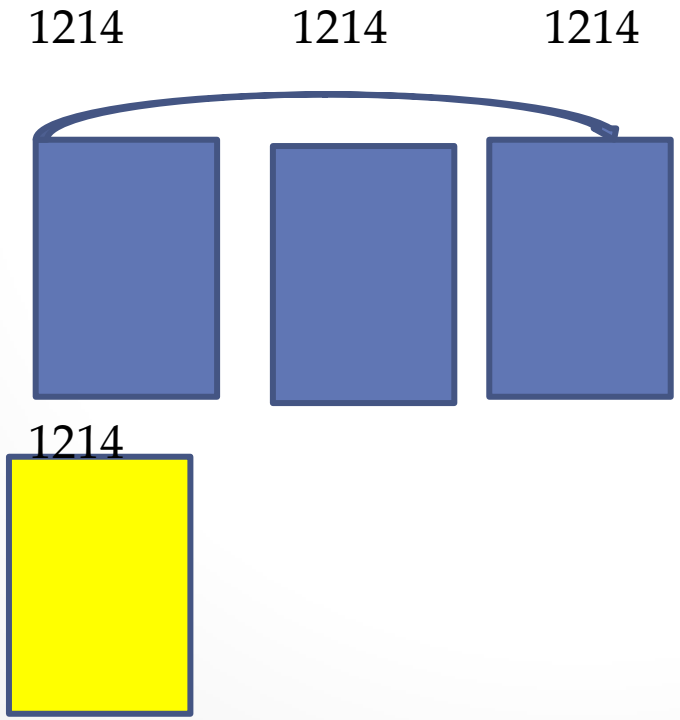
Which operation?



Annie and Sam share the sum of these two amounts. Annie gets 3 times as much as Sam. How much more than Sam will Annie get?

3597+ 1259= 4856

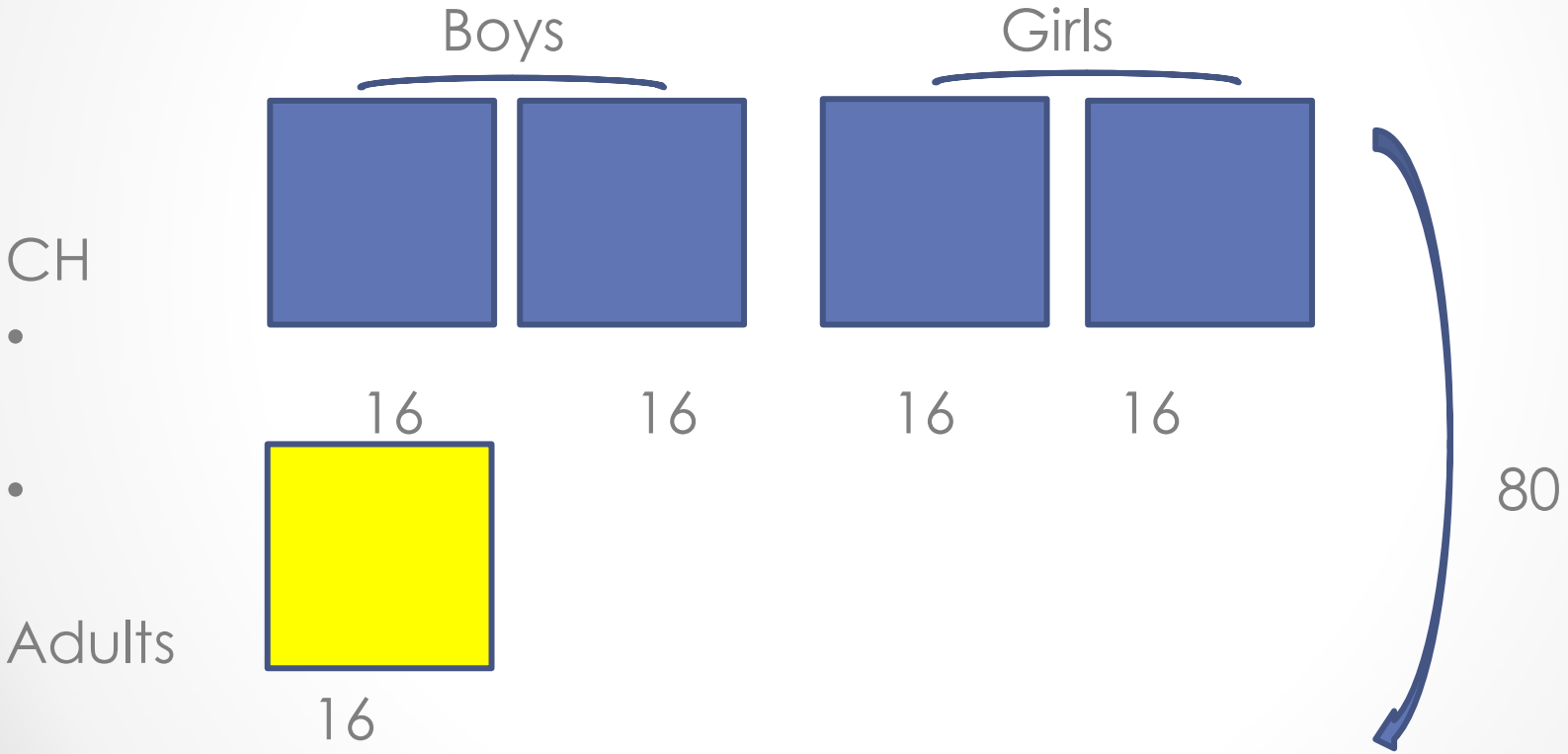
- £3597
- £1259



4856/4=1214

1214x 3=3642

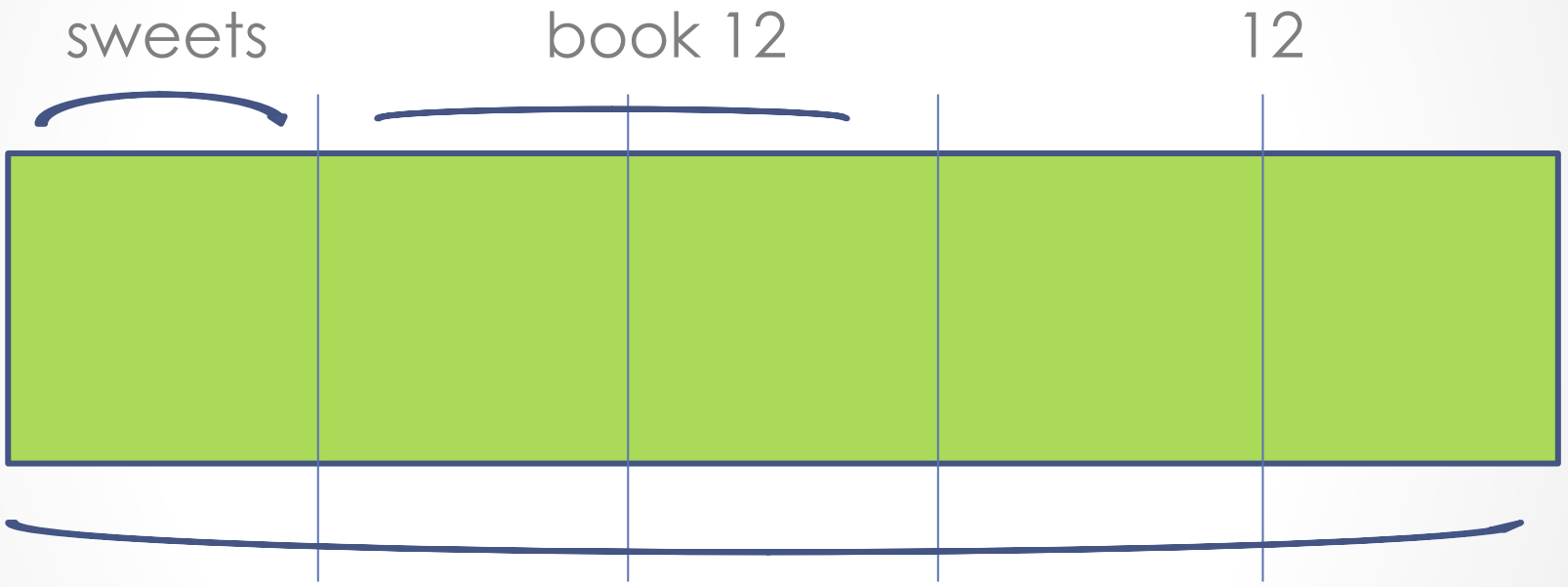
There are four times as many children as there are adults at a science museum. The number of boys is equal to the number of girls. Altogether, there are 80 visitors at the museum. How many boys are there?



80/5= 16

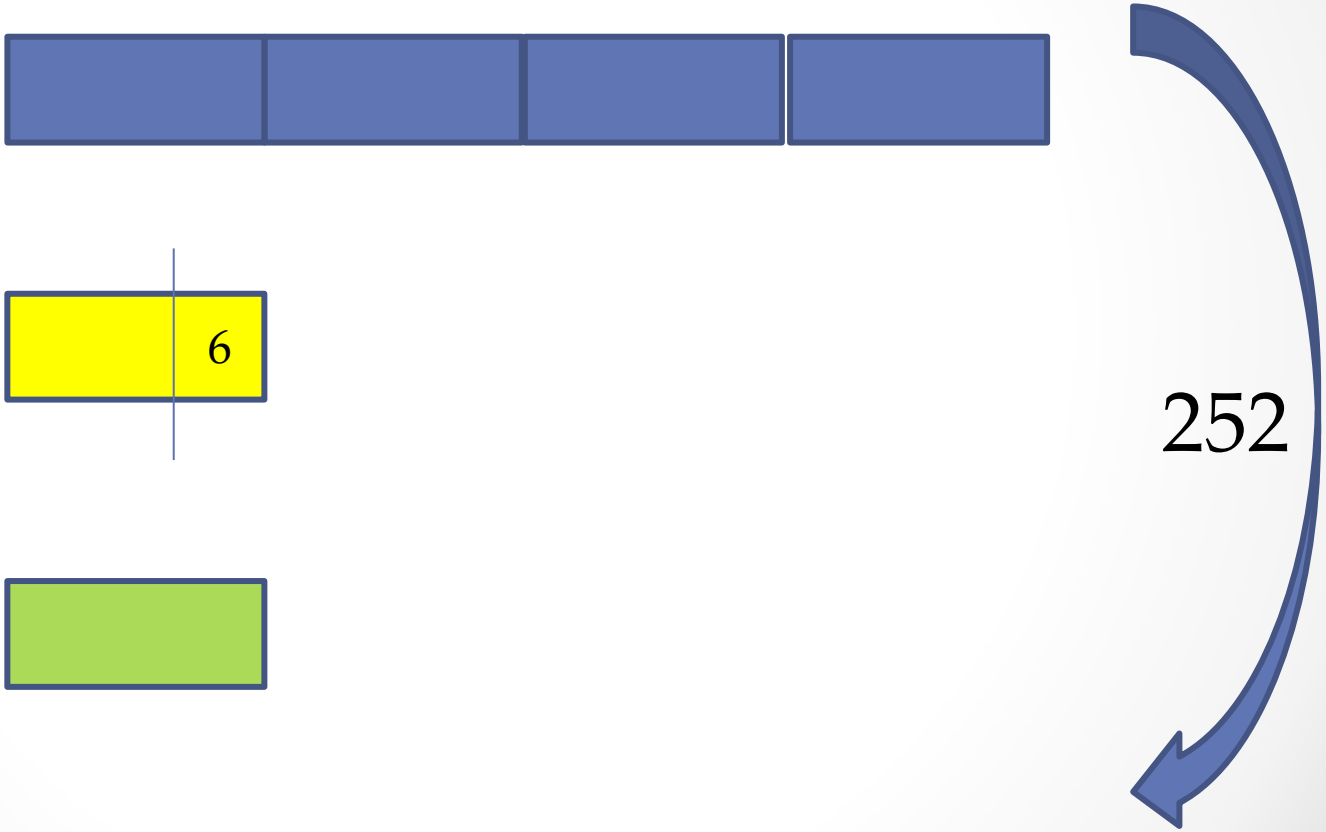
16x2= 32

Jordan spent 1/5 of his money on sweets,1/2 of the remainder on a book. The book cost £12. How much pocket money did he have?



6x5= £30

Jordan had £30 in pocket money

Mastery- Write a word problem that can be solved using this model…

- Elliot
- Hannah
- Anita