

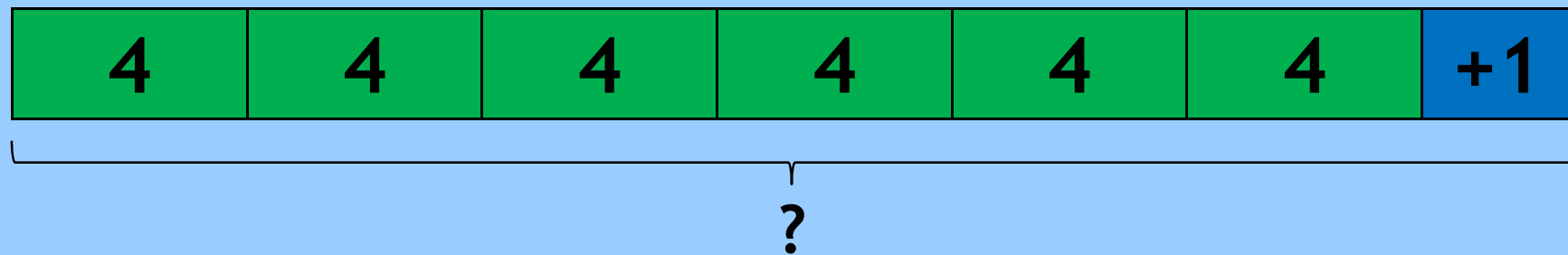
Stage 3



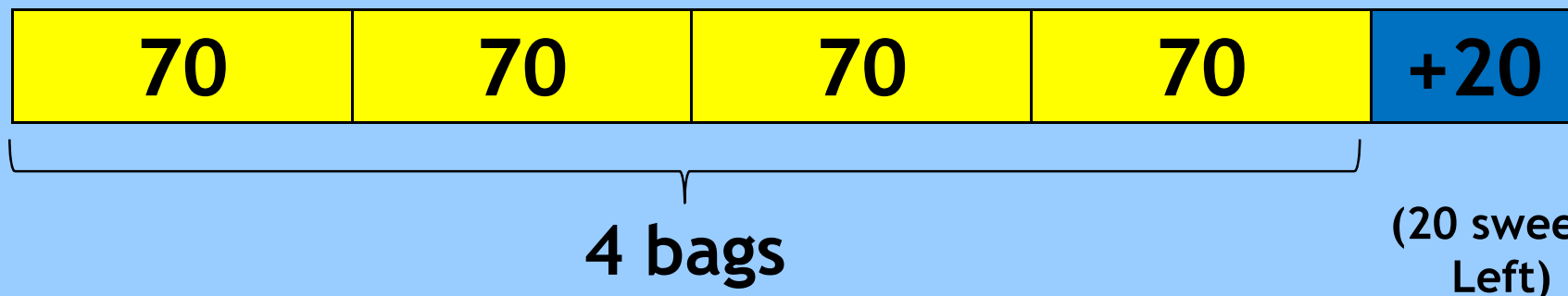
Stage 3 – Multiplication and Division

- ... interpret remainders appropriately for the context. (The aim of these examples is to support understanding the bar model with remainders)

Multiplication: Tracey put 4 seeds into each of her pots. She uses 6 pots and has 1 seed left over. How many seeds did she start with?



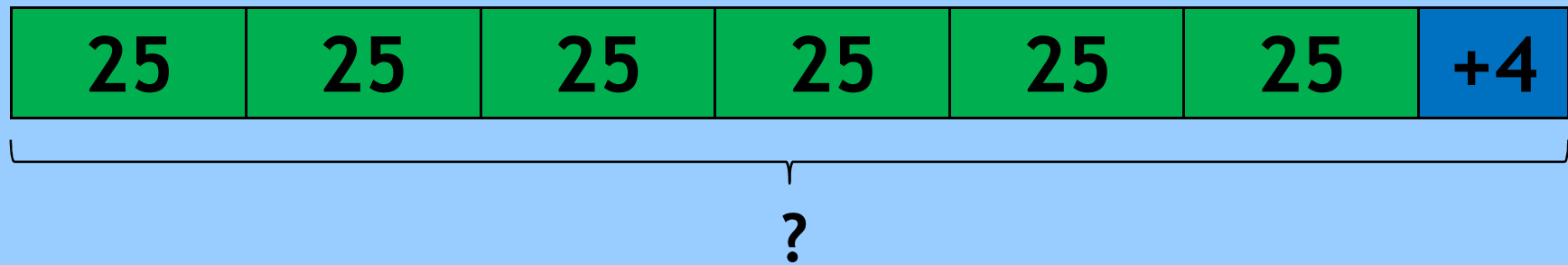
Grouping: Carl has 300 sweets. He wants to put 70 sweets in each bag. How many bags can he fill?



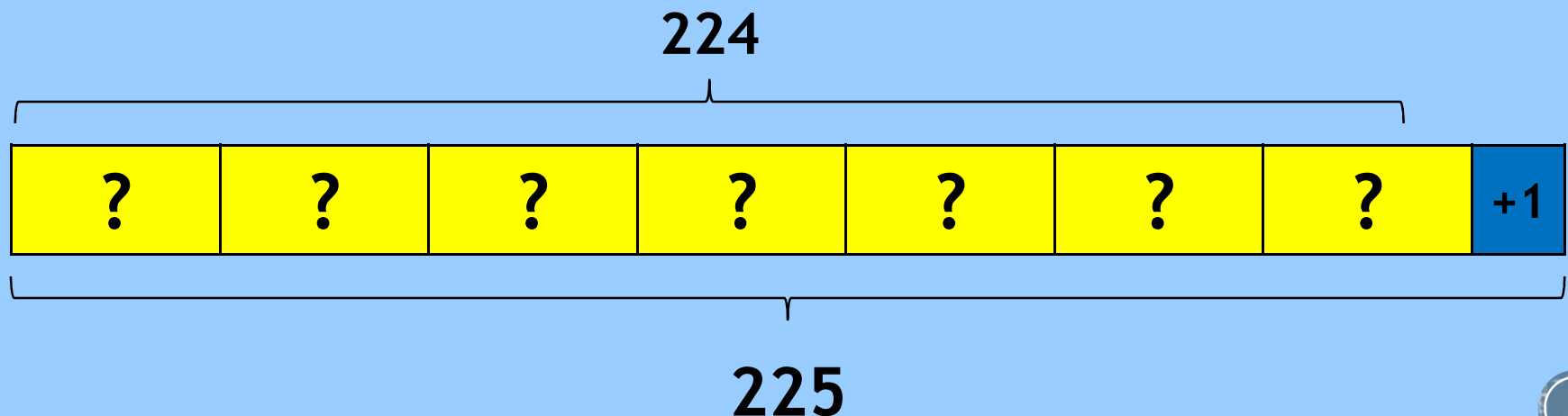
Stage 3 – Multiplication and Division

Exploring deep understanding of the division notation:

$$\square \div 6 = 25 \text{ r } 4$$



$$225 \div \square = 7 \text{ r } 1$$

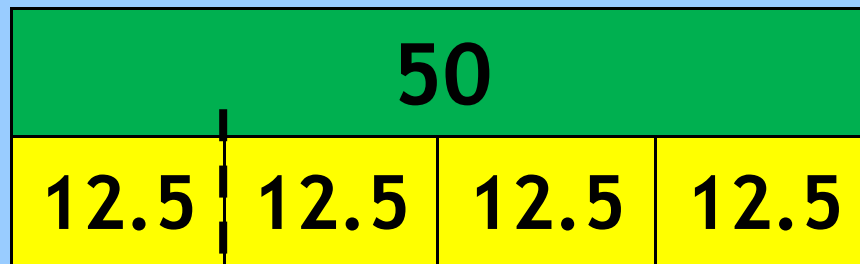


Stage 3 – Multi-Step Problems

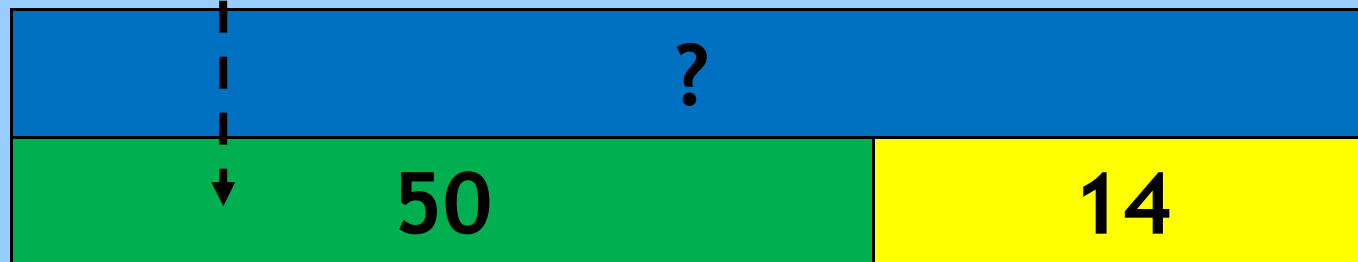
- Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the equals sign.

Every day, for 4 days, Sally scored 12.5 on her test. On her fifth day, she scored 14. What was her total score for the week?

Step 1

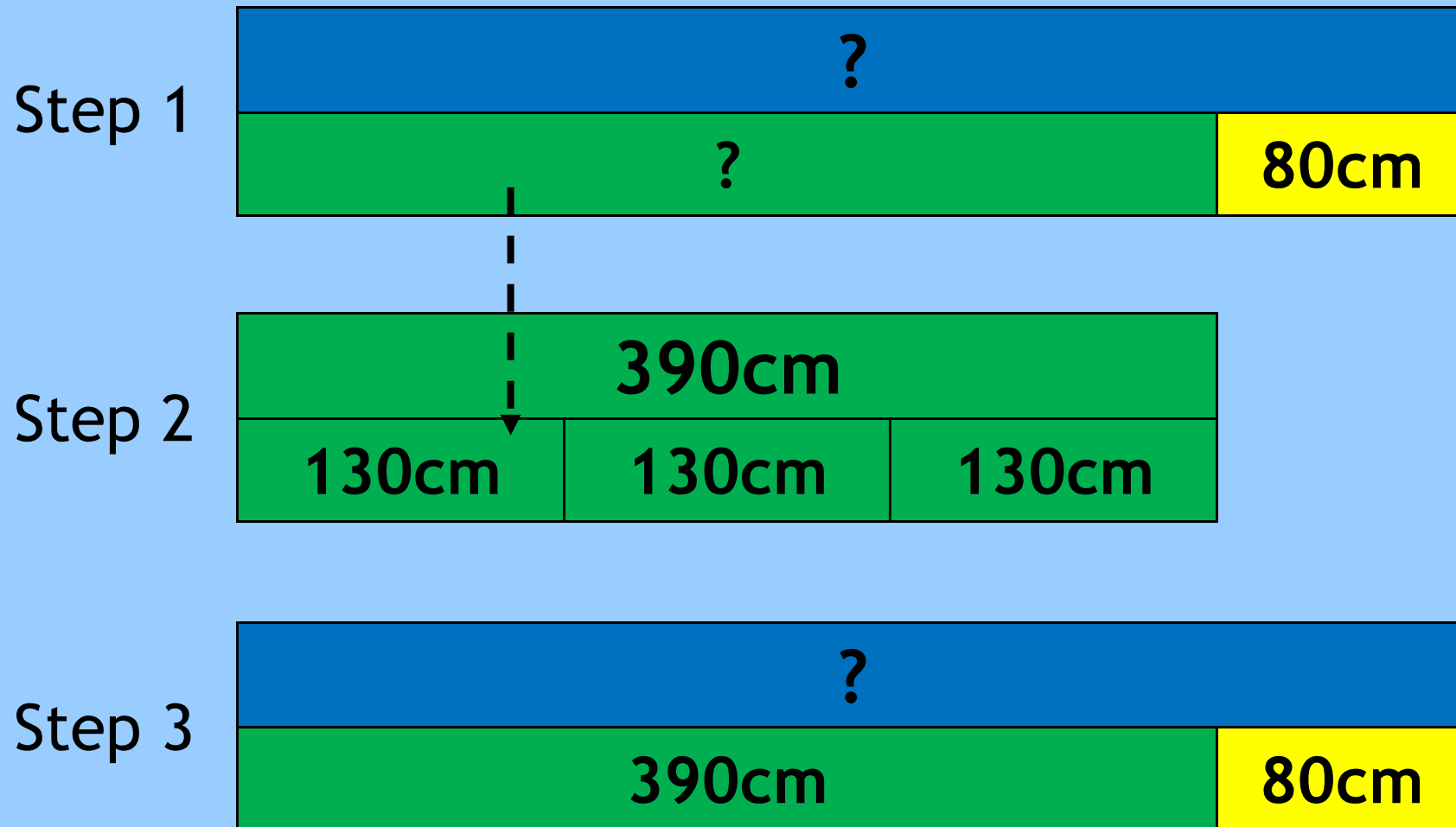


Step 2



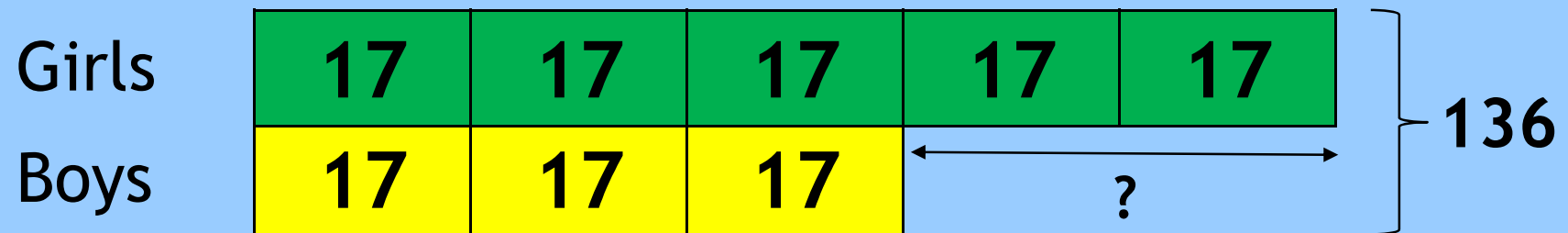
Stage 3 – Multi-Step Problems

I cut 80cm from a length of ribbon and shared the remainder between 3 friends. Each friend now has 1.3m of ribbon. How much did I start with?



Stage 3 – Multi-Step Problems

At the school disco there are 5 girls to every 3 boys. If there are 136 children at the disco. How many more girls than boys are there?

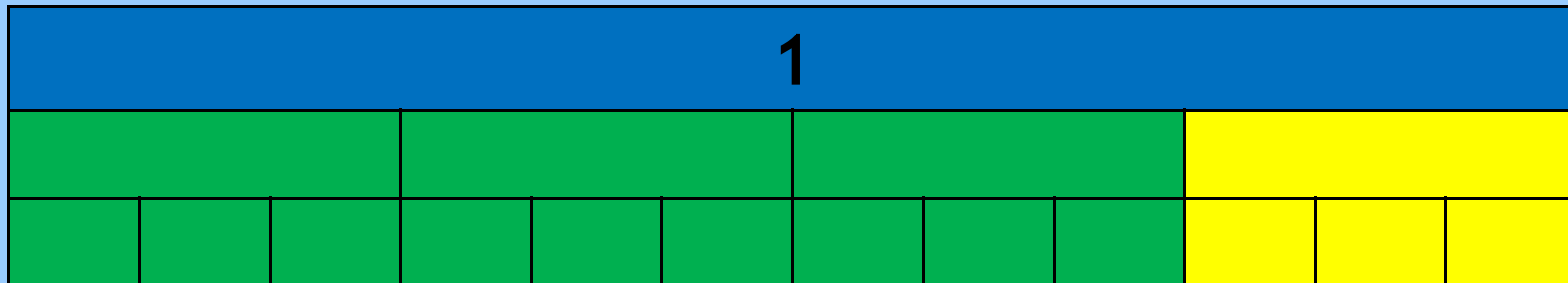


Stage 3 – Fractions

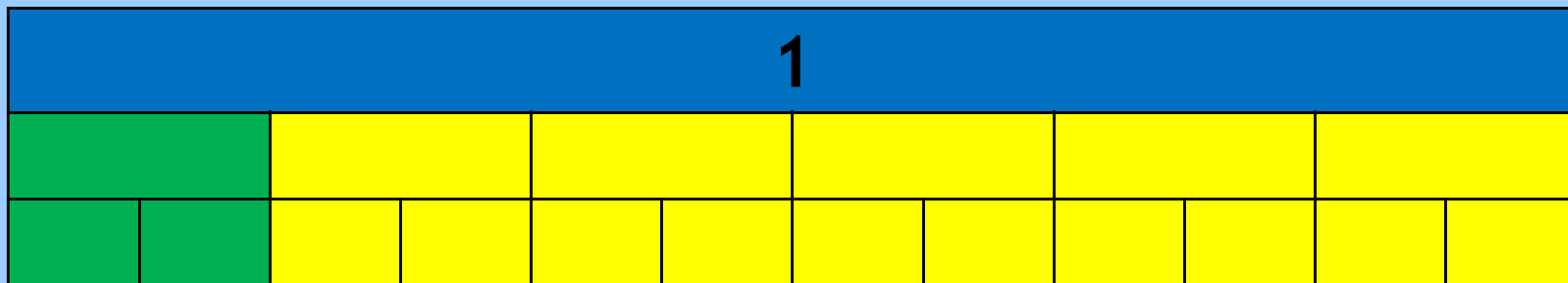
- Compare and order fractions whose denominators are all multiples of the same number. (The aim is for the children to discover the relationship and the rule for themselves - see Stage 2)

Which fraction is greater $\frac{3}{4}$ or $\frac{1}{6}$?

Three quarters converted into twelfths:



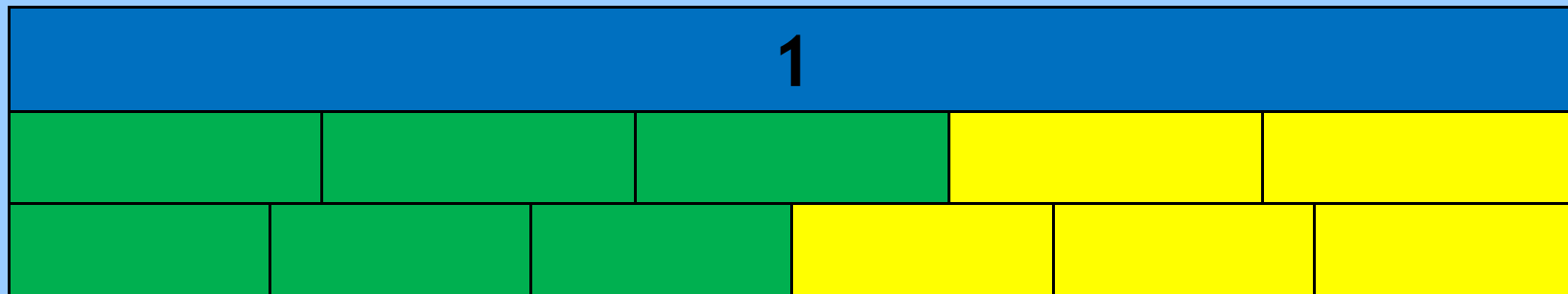
One sixth converted into twelfths:



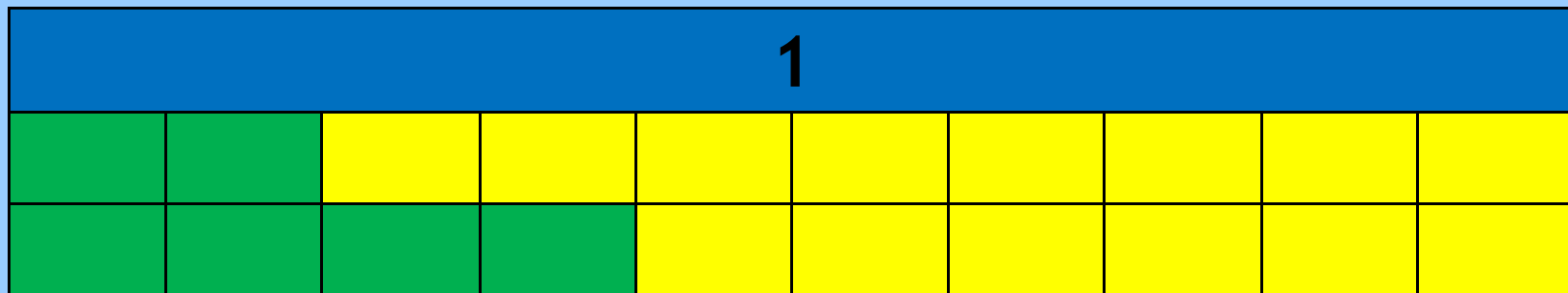
Stage 3 – Fractions

Encourage the children to look for patterns:

You can compare fractions that have the same numerator by comparing their denominators. Which is bigger $\frac{3}{5}$ or $\frac{3}{6}$?



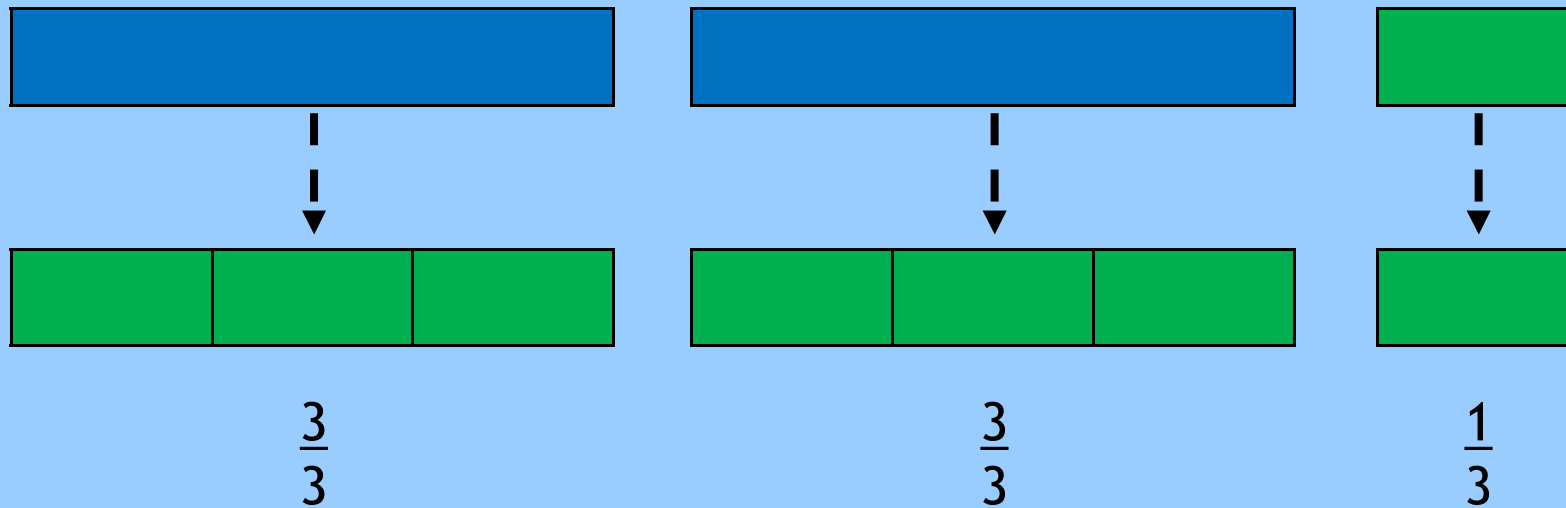
You can compare fractions that have the same denominator by comparing their numerators. Which is smaller $\frac{2}{10}$ or $\frac{4}{10}$? How much smaller?



Stage 3 – Fractions

- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number.

Convert $2\frac{1}{3}$ into an improper fraction (Cuisenaire rods experience).



$$\frac{3}{3} + \frac{3}{3} + \frac{1}{3} = \frac{7}{3}$$



Stage 3 – Fractions

Convert $\frac{13}{7}$ to a mixed number.



$\frac{7}{7}$



$\frac{6}{7}$

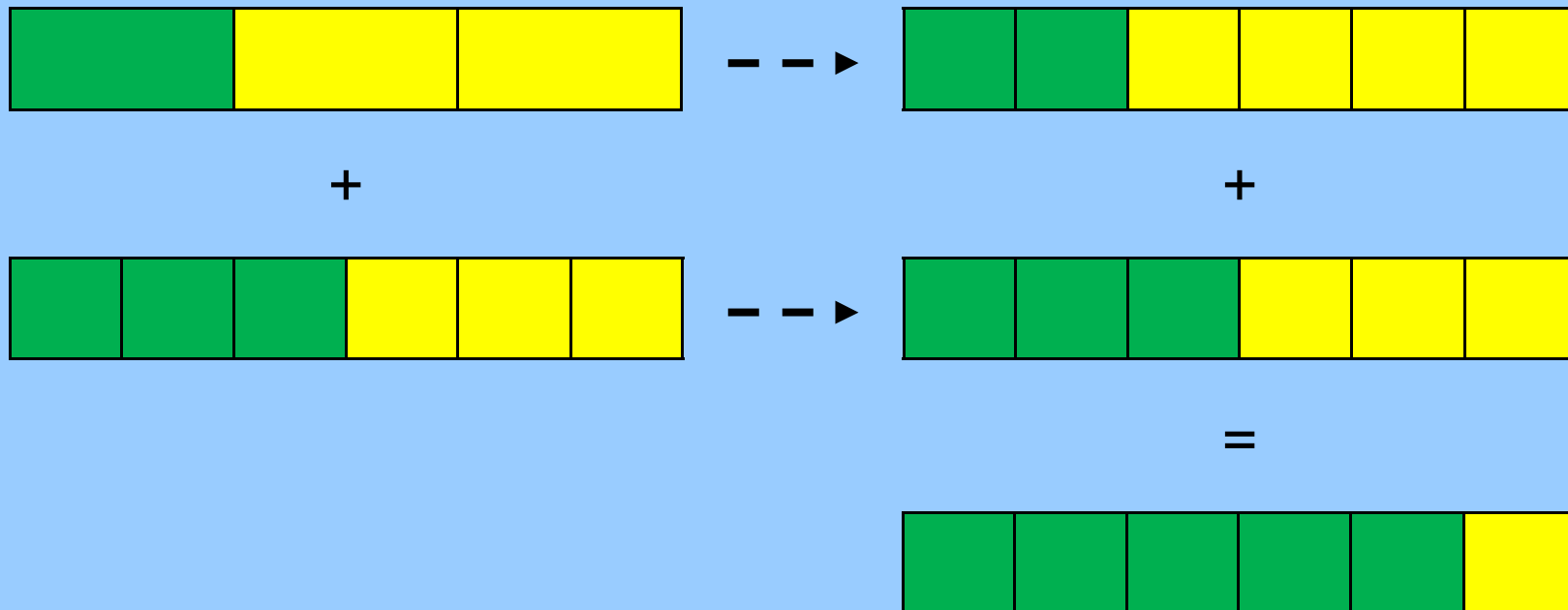
$$\frac{13}{7} = 1 \frac{6}{7}$$



Stage 3 – Fractions

- Add and subtract fractions with the same denominator and multiples of the same number.

Calculate $\frac{1}{3} + \frac{3}{6}$



$$\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$$



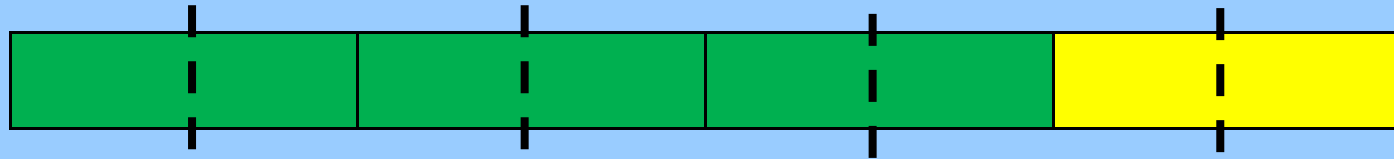
Stage 3 – Fractions

Sam and Luis have a pizza each. Sam eats $\frac{3}{4}$ of his pizza. Luis eats $\frac{7}{8}$ of his pizza. How much pizza have they eaten altogether?

Luis



Sam



$$\frac{7}{8} + \frac{6}{8} = \frac{13}{8}$$



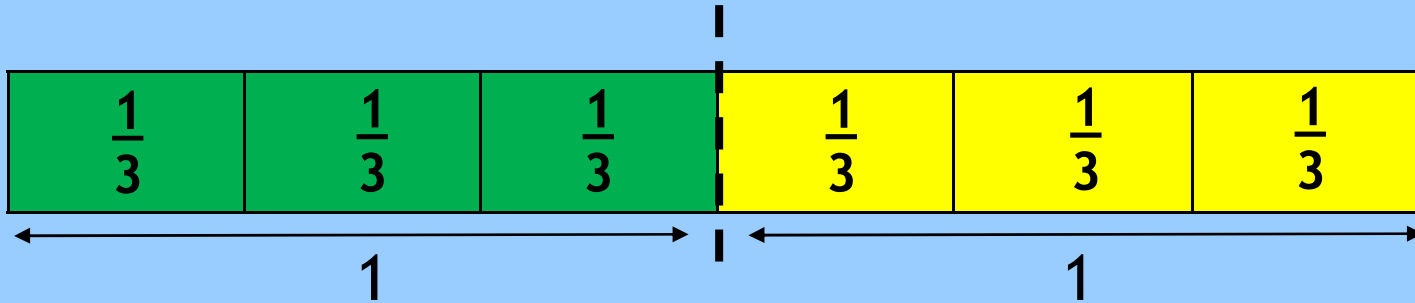
$$\frac{13}{8} = 1 \frac{5}{8}$$



Stage 3 – Fractions

- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

Calculate $6 \times \frac{1}{3}$



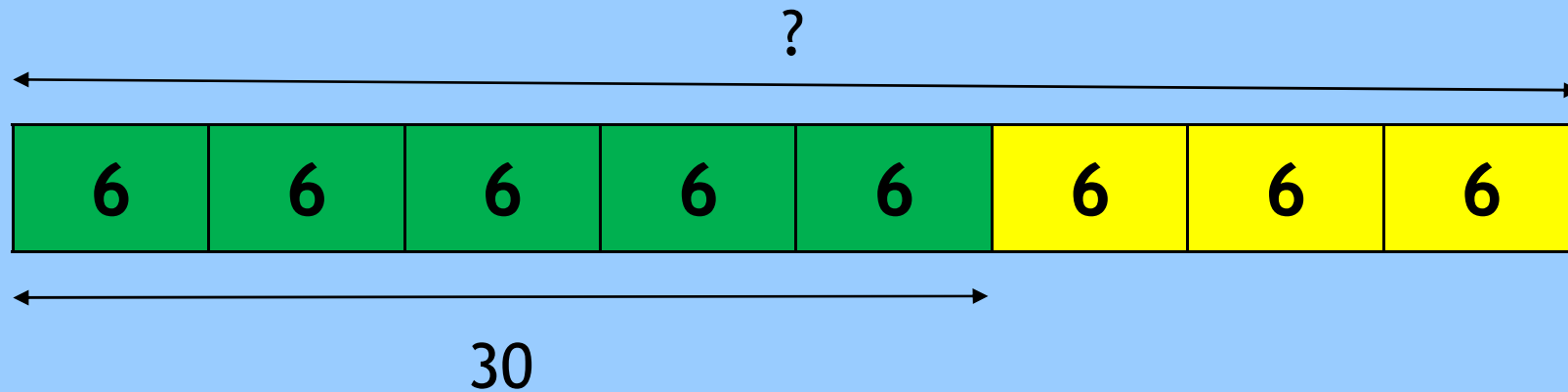
$$\frac{6}{3} = 2$$



Stage 3 – Fractions

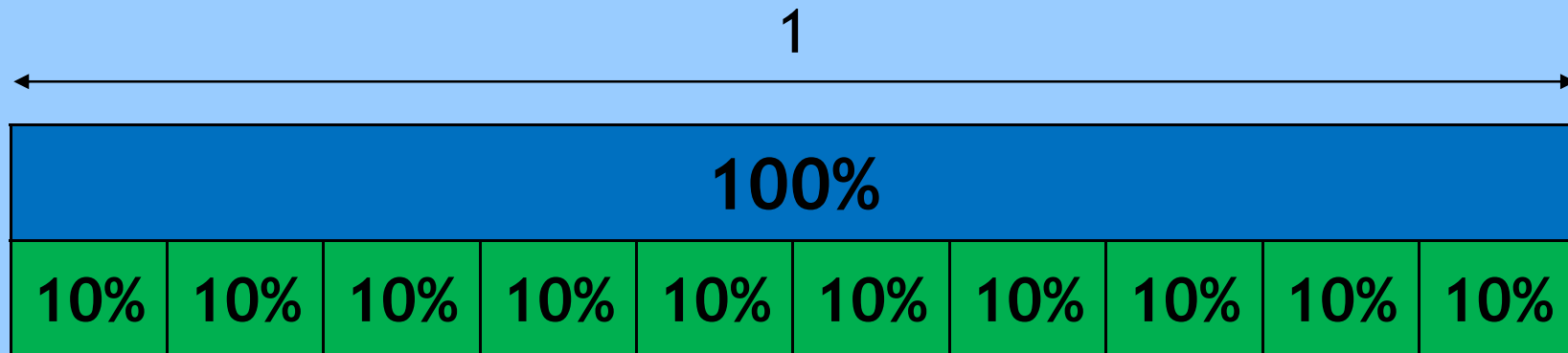
- Solving problems involving fractions.

30 is $\frac{5}{8}$ of a number. What is the number?



Stage 3 – Percentages

- Recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator hundred, and as a decimal.



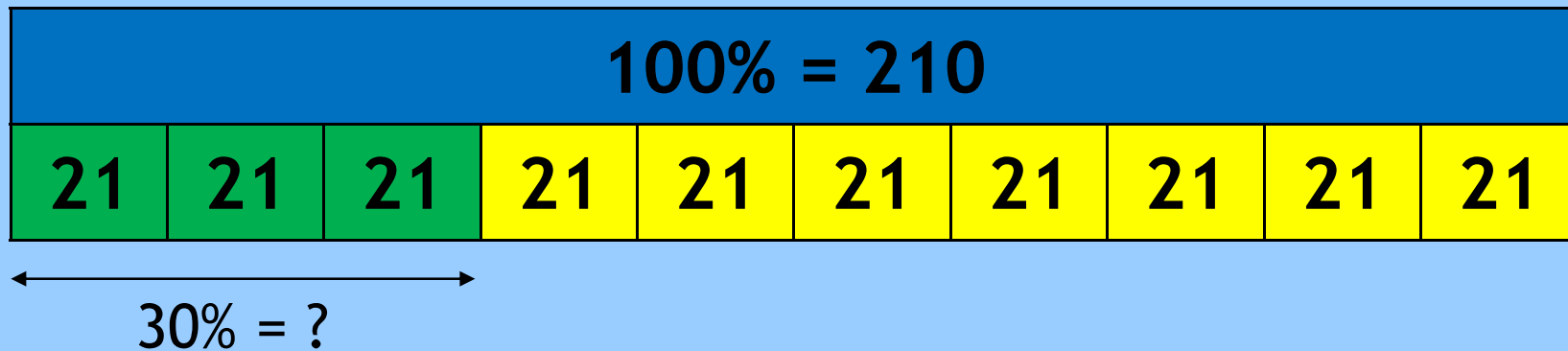
$$10\% = \frac{10}{100} = \frac{1}{10} = 0.1$$



Stage 3 – Percentages

- Solve problems which require knowledge of percentage.

What is 30% of 210?



Twelve is 40% of a number. What is the number?

