Parent workshop

1.How we teach your child maths?

2.What is the end of Key Stage 2 expectation?

3. What is ‘greater depth?’

4.What can we be doing at home to help our child in maths?

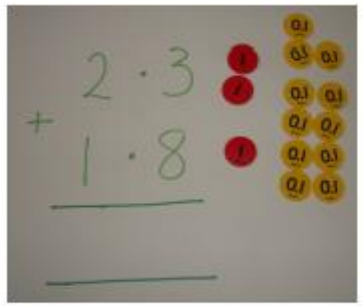
5.Why are you not allowing my child to access the Year 3…. 7 curriculum?

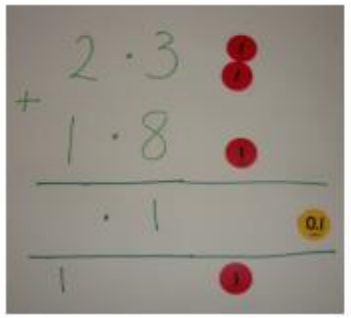
The four operations- addition and subtraction

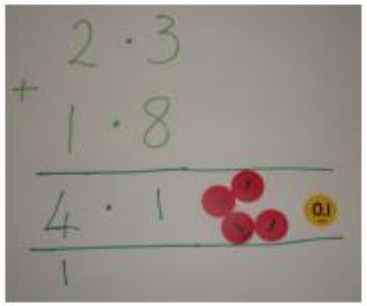
We look at explaining each term within the context of CPA (concrete, pictorial and abstract), which helps embed an understanding of what

Addition

Working with decimals







Year 5

- add and subtract whole numbers with more than 4 digits,
- including using formal written methods (columnar addition and subtraction)
- add and subtract numbers mentally with increasingly large numbers

Non Statutory (Fractions)

- They mentally add and subtract tenths, and one digit whole numbers and tenths
- use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Add up tenths first then whole numbers.

10 x 0.1-1 whole so exchange for 1 counter. 0.1 left in tenths column.

Subtraction

Children should continue to use concrete apparatus as required. They need to understand the structure of the maths.

This includes for decimals

2 - 0.3 = 1.7

1.7 + ☐ = 2

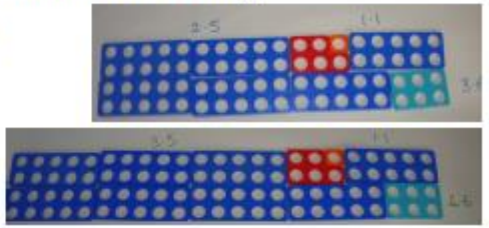
Year 6

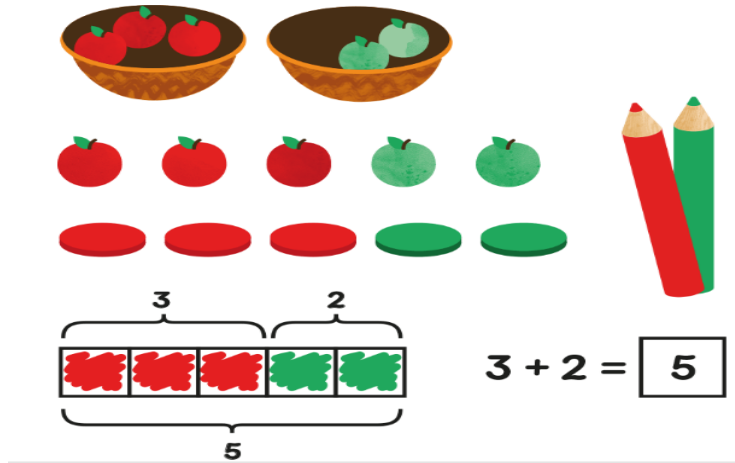
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

True or false?

Explain how you know *without* calculating.

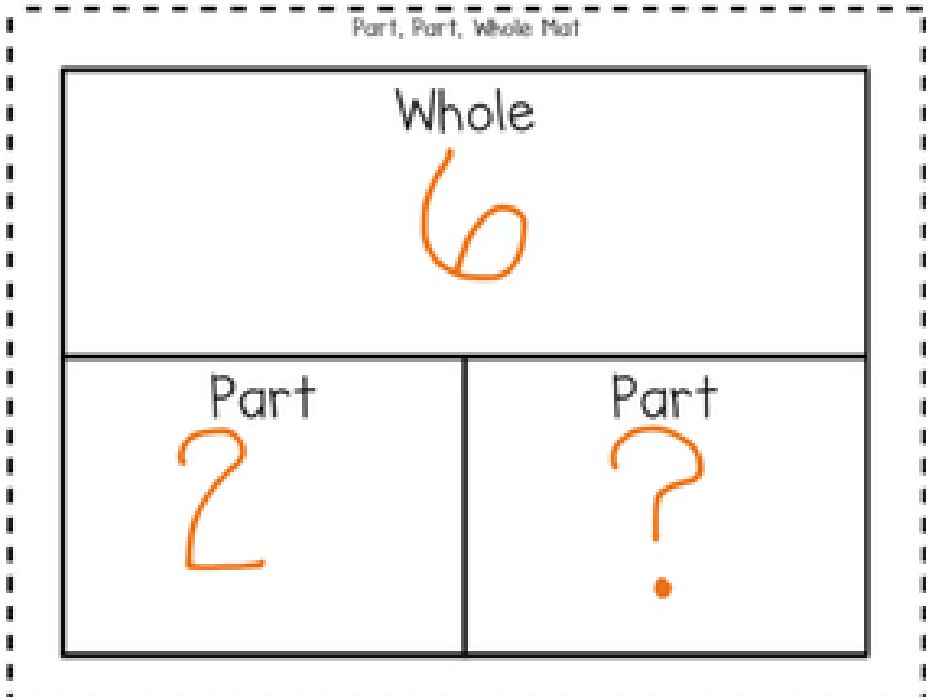
3.6 - 2.5 = 4.6 - 3.5





The four operations- addition and subtraction

We look at explaining each term within the context of CPA (concrete, pictorial and abstract), which helps embed an understanding of what is happening with the maths.



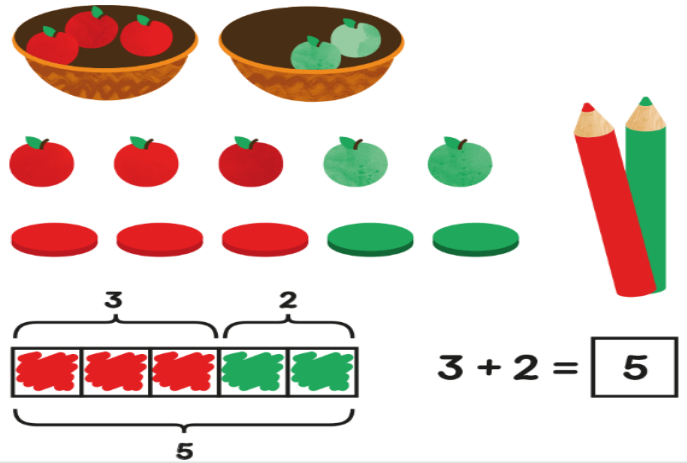
The four operations- addition and subtraction

We look at explaining each term within the context of CPA (concrete, pictorial and abstract), which helps embed an understanding of what is happening with the maths.

Statutory Guidance– Written Methods

Addition and subtraction

789 + 642 becomes	874 – 523 becomes	932 – 457 becomes	932 – 457 becomes
7 8 9 + 6 4 2 1 4 3 1 1 1	8 7 4 – 5 2 3 3 5 1	8 12 1 9 3 2 – 4 5 7 4 7 5	1 1 9 3 2 – 4 5 7 5 6 4 7 5
Answer: 1431	Answer: 351	Answer: 475	Answer: 475



The four operations- multiplication and division

Complete:

6 x 2 =

6 x 10 =

6 x 20 =

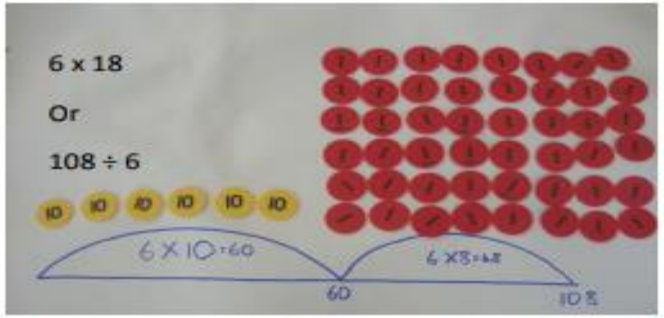
6 x 22 =

Developing Reasoning and Application to other domains

Year 3

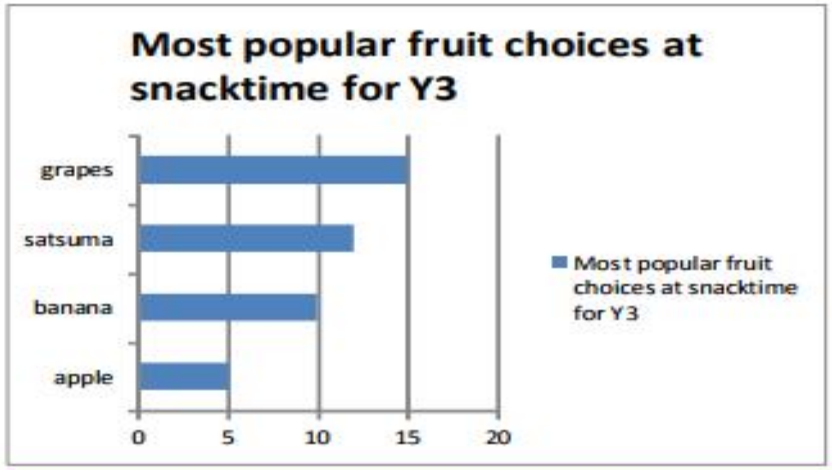
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit times one-digit numbers, using mental methods and progressing to formal written methods

What is the same/different? Model these to show the connections



Children need a good grasp of using multiplication and division facts to allow them to use informal jottings to solve simple calculations mentally using recall of known facts.

Year 3 (Statistics)
Solve one and two step problems using information presented in scaled bar charts and pictograms
Non– Statutory
Pupils use simple scales e.g. 2, 5, 10 units per cm.



How many more people preferred banana to apple?

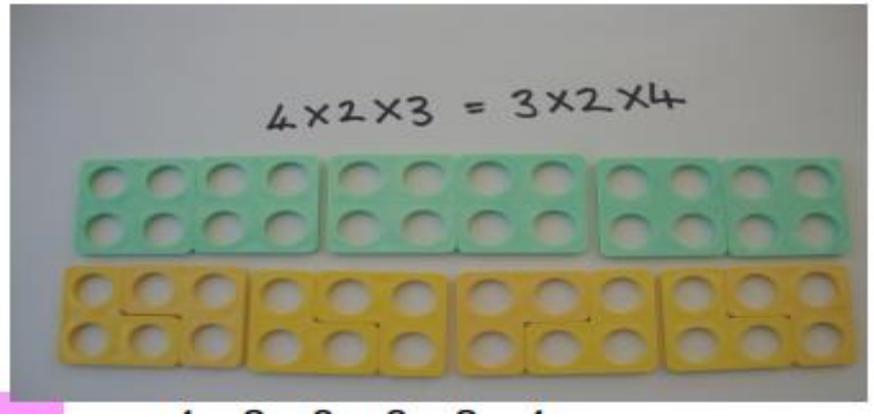
How many people had a snack altogether?

Count in 5's to help you

How many more people prefer cats to dogs?

5—2 = 3

Favourite Pets	
Cat	🐾🐾🐾🐾🐾
Dog	🐾🐾
Hamster	🐾🐾🐾
Each 🐾 stands for 2 votes	

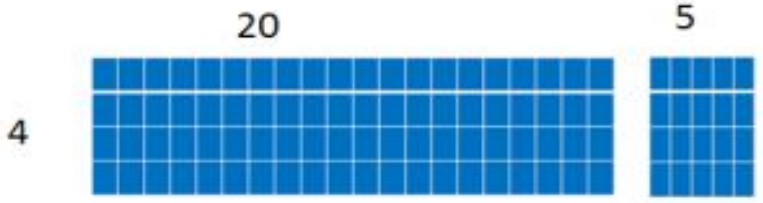


The four operations- multiplication and division

Moving towards formal written methods of multiplication and division

Multiplication

Ref: ITP: multiplication facts



Linking arrays and grid method

2 5

X 4

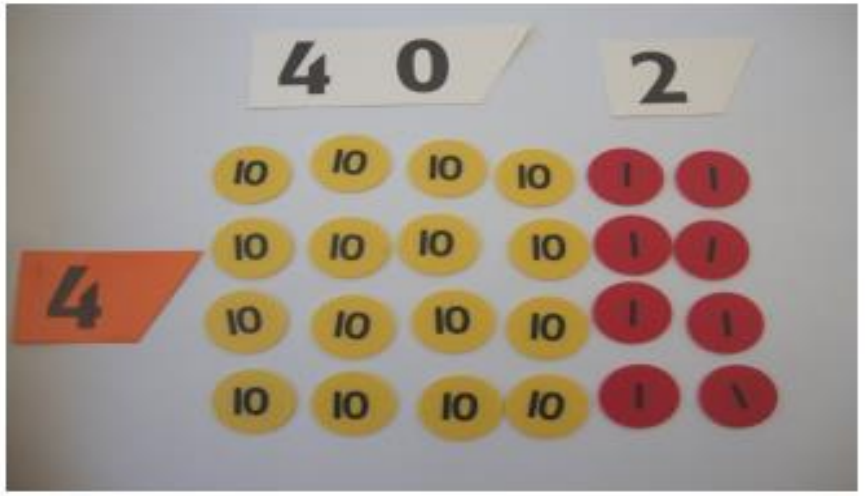
2 0 (5 x 4)

8 0 (20 x 4)

1 0 0

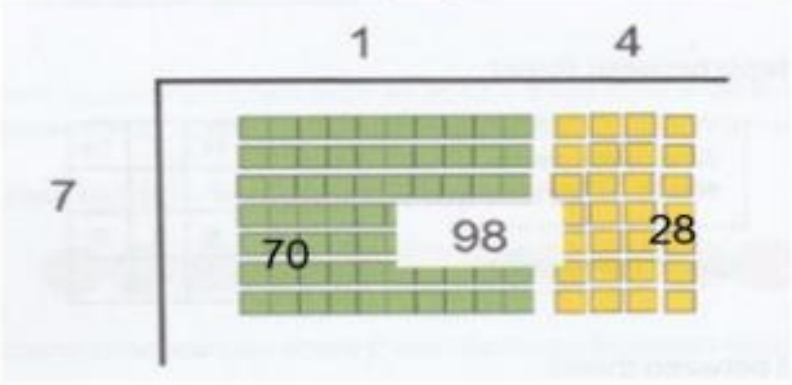
42 x 4 = 168

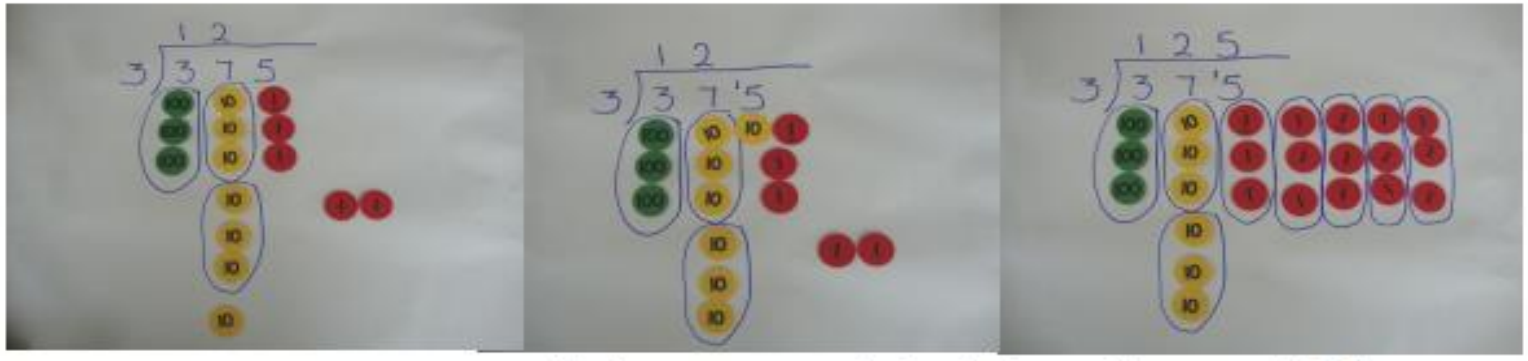
40 x 4 = 160



Division

Ref: NCETM





The four operations- multiplication and division

Statutory Guidance– Formal Written Methods

Short multiplication

24 × 6 becomes

$$\begin{array}{r} {\scriptstyle 2} \\ 2\ 4 \\ \times\ \ 6 \\ \hline 1\ 4\ 4 \end{array}$$

Answer: 144

342 × 7 becomes

$$\begin{array}{r} {\scriptstyle 2\ 1} \\ 3\ 4\ 2 \\ \times\ \ \ 7 \\ \hline 2\ 3\ 9\ 4 \end{array}$$

Answer: 2394

2741 × 6 becomes

$$\begin{array}{r} {\scriptstyle 4\ 2} \\ 2\ 7\ 4\ 1 \\ \times\ \ \ \ 6 \\ \hline 1\ 6\ 4\ 4\ 6 \end{array}$$

Answer: 16 446

Long multiplication

24 × 16 becomes

$$\begin{array}{r} {\scriptstyle 2} \\ 2\ 4 \\ \times\ 1\ 6 \\ \hline 2\ 4\ 0 \\ 1\ 4\ 4 \\ \hline 3\ 8\ 4 \end{array}$$

Answer: 384

124 × 26 becomes

$$\begin{array}{r} {\scriptstyle 1\ 2} \\ 1\ 2\ 4 \\ \times\ \ 2\ 6 \\ \hline 2\ 4\ 8\ 0 \\ 7\ 4\ 4 \\ \hline 3\ 2\ 2\ 4 \\ {\scriptstyle 1\ 1} \end{array}$$

Answer: 3224

124 × 26 becomes

$$\begin{array}{r} {\scriptstyle 1\ 2} \\ 1\ 2\ 4 \\ \times\ \ 2\ 6 \\ \hline 7\ 4\ 4 \\ 2\ 4\ 8\ 0 \\ \hline 3\ 2\ 2\ 4 \\ {\scriptstyle 1\ 1} \end{array}$$

Answer: 3224

The four operations- multiplication and division

Statutory Guidance– Formal Written Methods

Short division

98 ÷ 7 becomes

$$\begin{array}{r} 1\ 4 \\ 7\overline{)\,9^{2}\ 8} \end{array}$$

Answer: 14

432 ÷ 5 becomes

$$\begin{array}{r} 8\ 6\ \text{r}\,2 \\ 5\overline{)\,4\ 3^{3}\ 2} \end{array}$$

Answer: 86 remainder 2

496 ÷ 11 becomes

$$\begin{array}{r} 4\ 5\ \text{r}\,1 \\ 1\ 1\overline{)\,4\ 9^{5}\ 6} \end{array}$$

Answer: $45\frac{1}{11}$

Long division

432 ÷ 15 becomes

$$\begin{array}{r} 2\ 8\ \text{r}\,12 \\ 1\ 5\overline{)\,4\ 3\ 2} \\ 3\ 0\ 0 \\ \hline 1\ 3\ 2 \\ 1\ 2\ 0 \\ \hline 1\ 2 \end{array}$$

Answer: 28 remainder 12

432 ÷ 15 becomes

$$\begin{array}{r} 2\ 8 \\ 1\ 5\overline{)\,4\ 3\ 2} \\ 3\ 0\ 0 \quad 15\times 20 \\ \hline 1\ 3\ 2 \\ 1\ 2\ 0 \quad 15\times 8 \\ \hline 1\ 2 \end{array}$$

$\frac{\cancel{12}}{\cancel{15}} = \frac{4}{5}$

Answer: $28\frac{4}{5}$

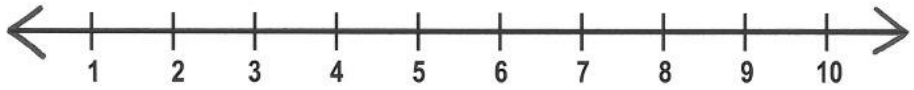
432 ÷ 15 becomes

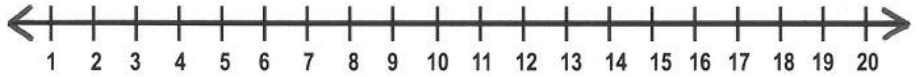
$$\begin{array}{r} 2\ 8\cdot 8 \\ 1\ 5\overline{)\,4\ 3\ 2\cdot 0} \\ 3\ 0 \\ \hline 1\ 3\ 2 \\ 1\ 2\ 0 \\ \hline 1\ 2\ 0 \\ 1\ 2\ 0 \\ \hline 0 \end{array}$$

Answer: 28·8

Counting- Linking in multiplication and division

Verbally





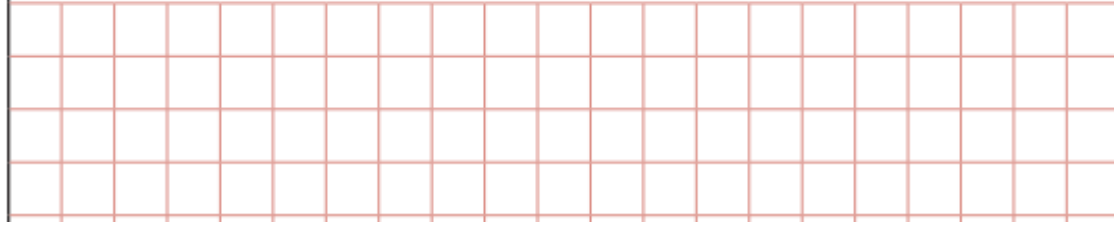
What has gone wrong in this pattern? Can you fix it?

12 24 36 60 72

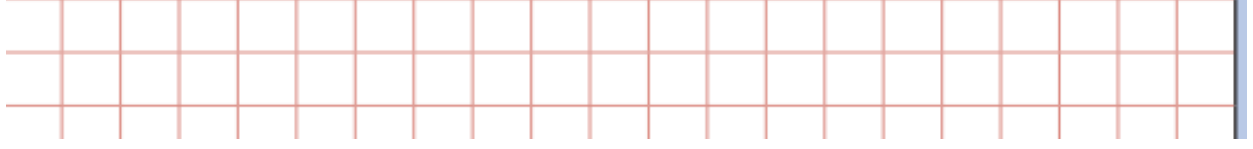
What types of question will my child have to answer at the end of the Key Stage?

$2{,}345 \times 1{,}000 =$

26 $\frac{1}{4} + \frac{1}{5} + \frac{1}{10} =$



$30 \times 40 =$



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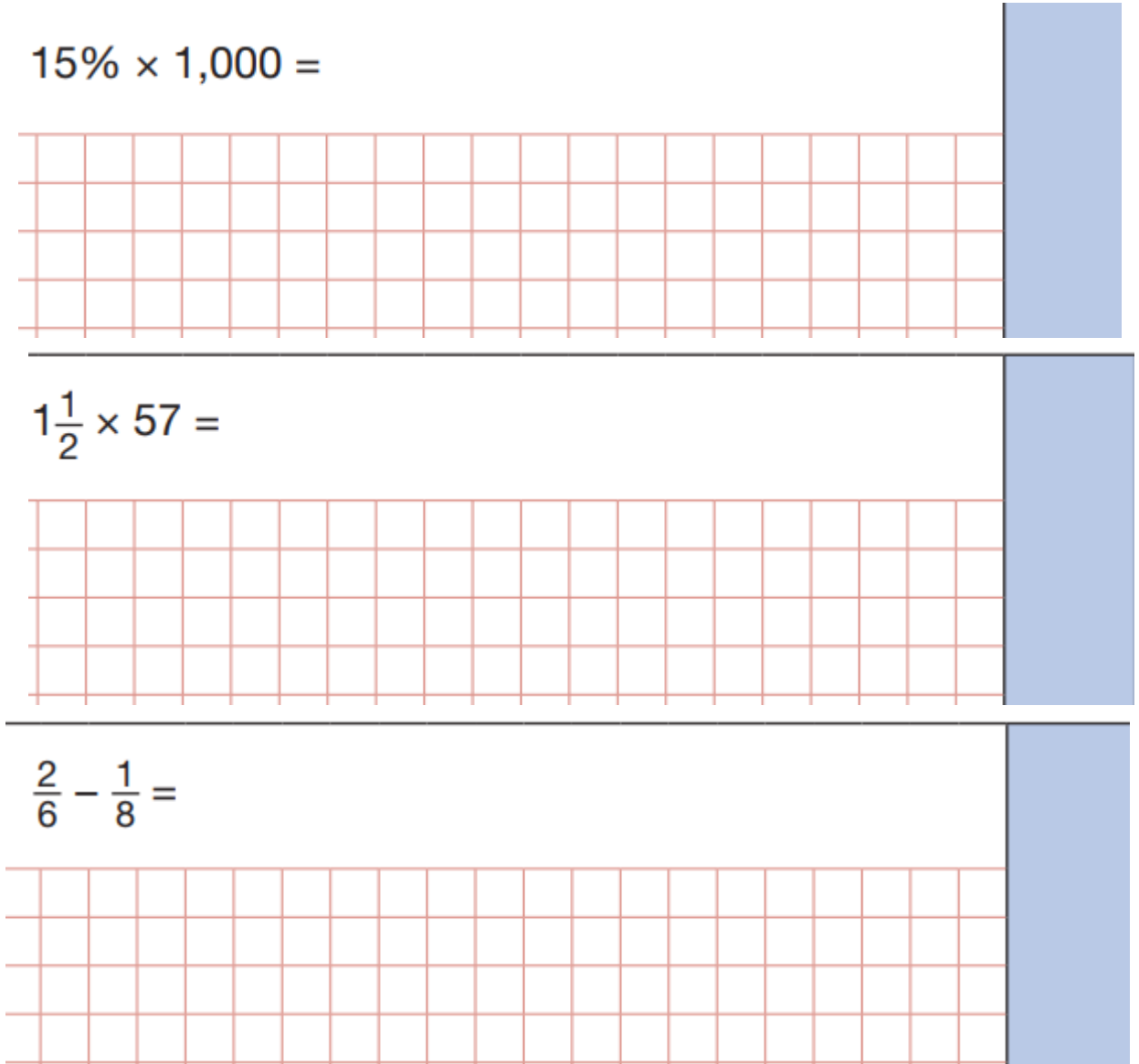


What types of question will my child have to answer at the end of the Key Stage?

$15\% \times 1{,}000 =$

$1\frac{1}{2} \times 57 =$

$\frac{2}{6} - \frac{1}{8} =$

What types of question will my child have to answer at the end of the Key Stage?

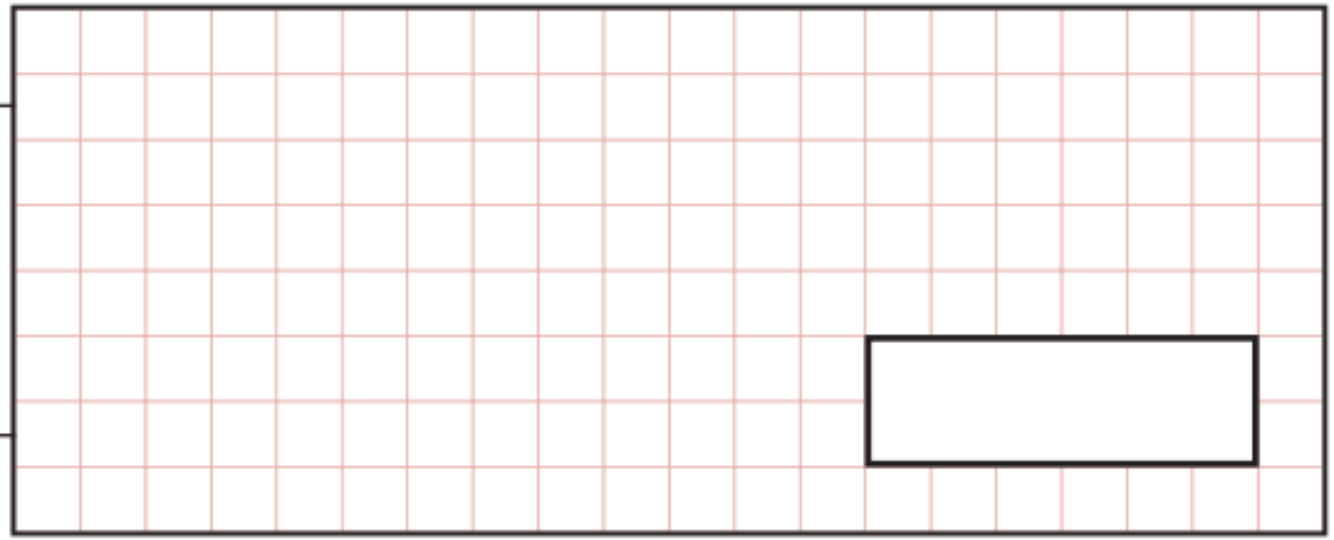
8 At the start of June, there were 1,793 toy cars in the shop.

During June,

- 8,728 more toy cars were delivered
- 9,473 toy cars were sold.

How many toy cars were left in the shop at the end of June?

Show your method



2 marks

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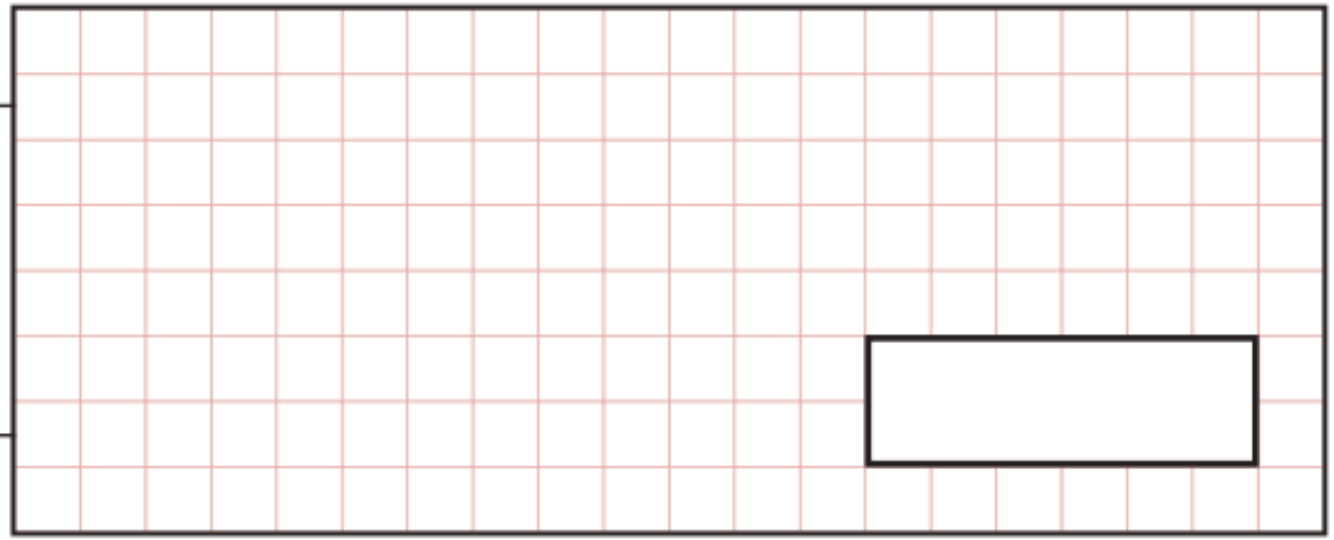


2 marks

19 Amina posts three large letters.

The postage costs the same for each letter.

She pays with a £20 note.

Her change is £14.96

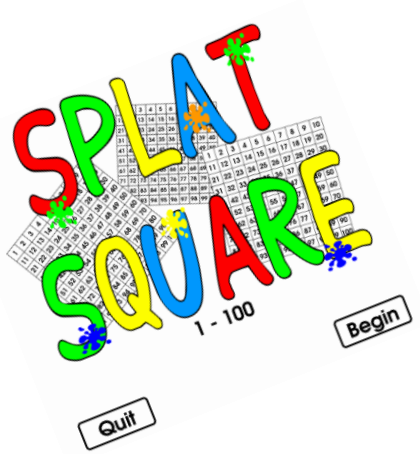
What is the cost of posting **one** letter?

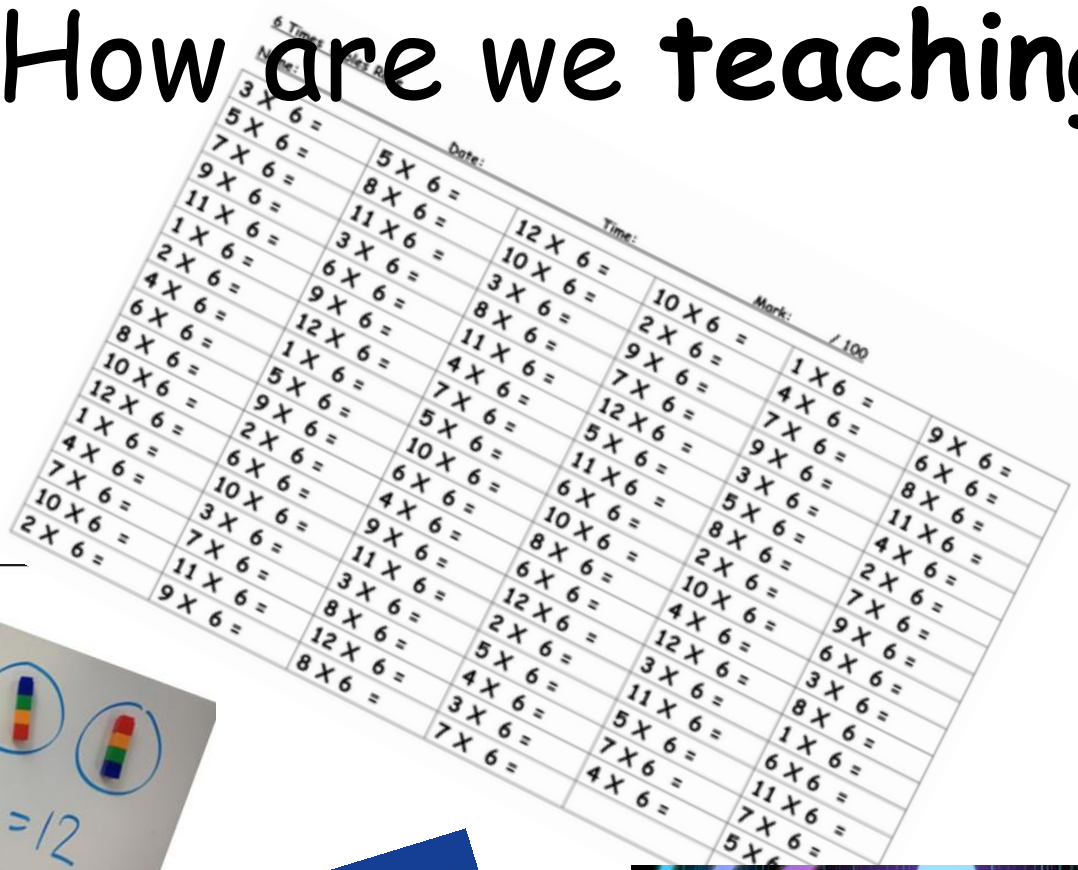
Show your method

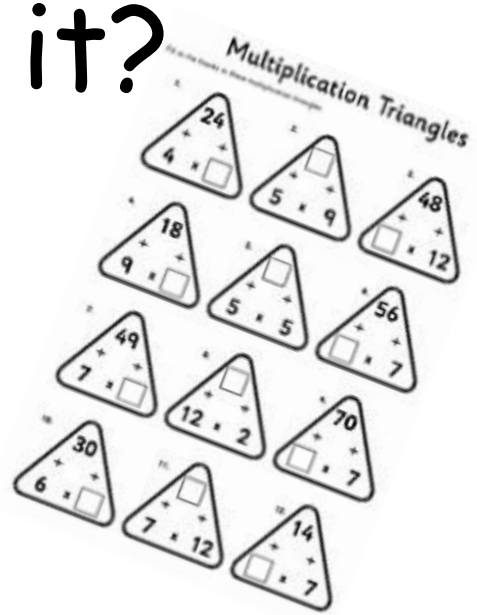
£

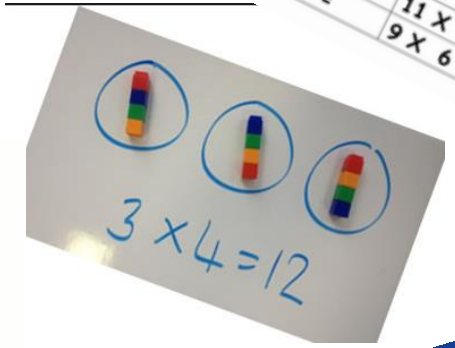
2 marks

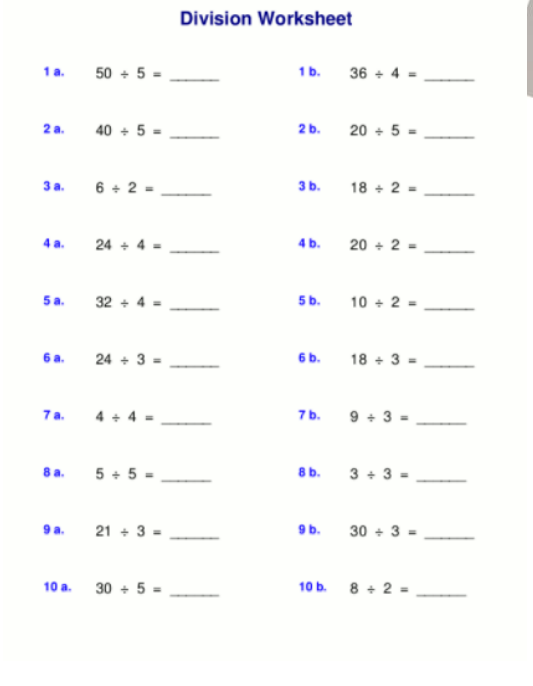
Times tables- How are we **teaching** it?

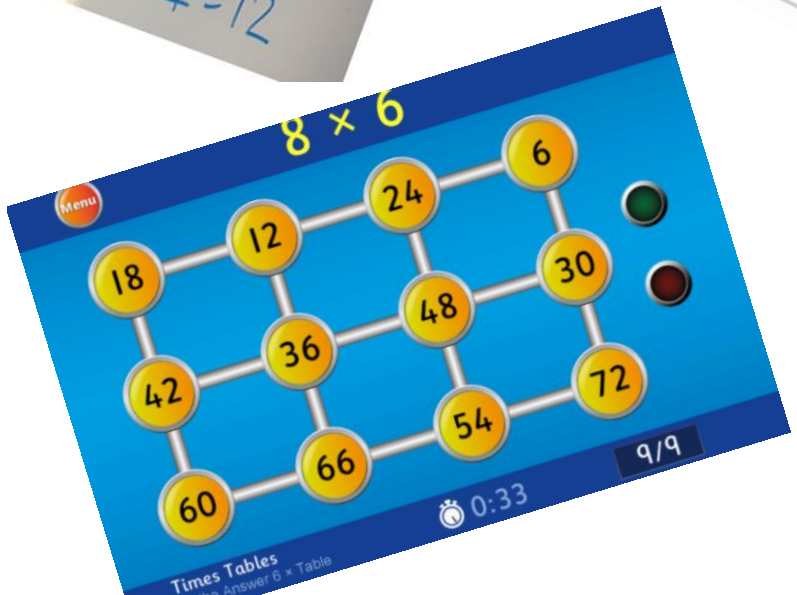












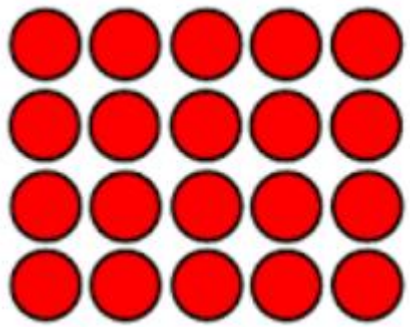
Times tables- ***teaching it***!

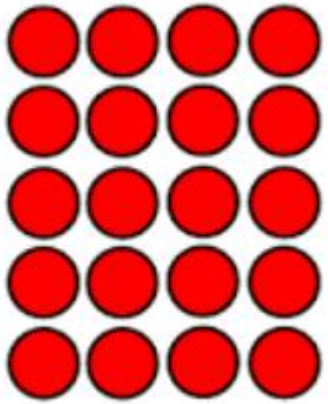
1. Exploring patterns- What do you notice about?
- Every other number in the 4 times table
- Every third number in the 3 times table
- The total of all the digits in the three times table

2. The difference between knowing and calculating- The importance of fluency!

3. Use concrete apparatus.

4. Making links
- How many sides would 25 pentagons have?
- How many days would there be in 13 weeks?
- How many weeks in 8 years?
- How many sides would 10 pentagons have?
- I have a pile of heptagons. In total they have 560 Sides. How many individual shapes do I have?





Always, Sometimes or Never? Number

Stage: 2 ★

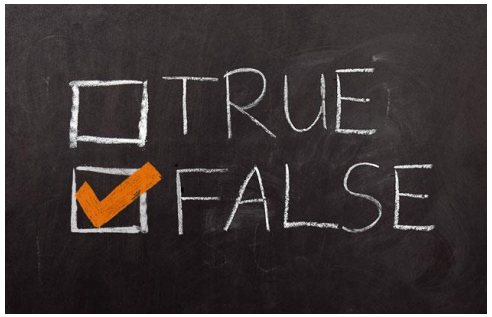
Are the following statements always true, sometimes true or never true?

How do you know?

The sum of three numbers is odd	If you add 1 to an odd number you get an even number
Multiples of 5 end in a 5	If you add two odd numbers you get an odd number
If you add a multiple of 10 to a multiple of 5 the answer is a multiple of 5	

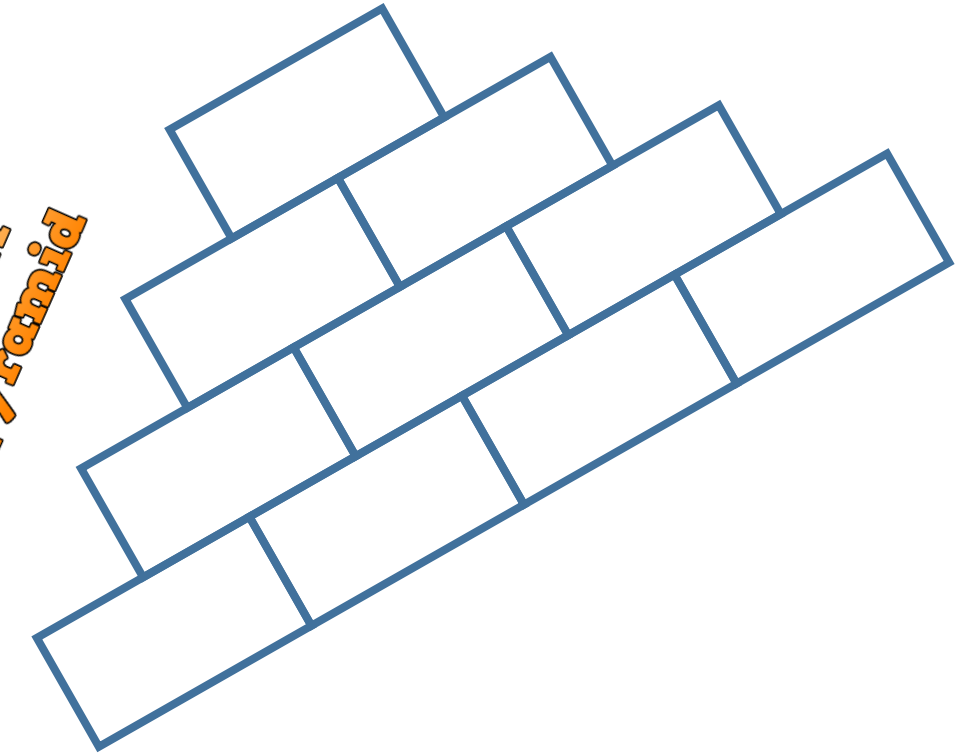
BALANCED EQUATIONS

6 + ? =10



All numbers in the 10 times table are also in the 5s?

Number pyramid



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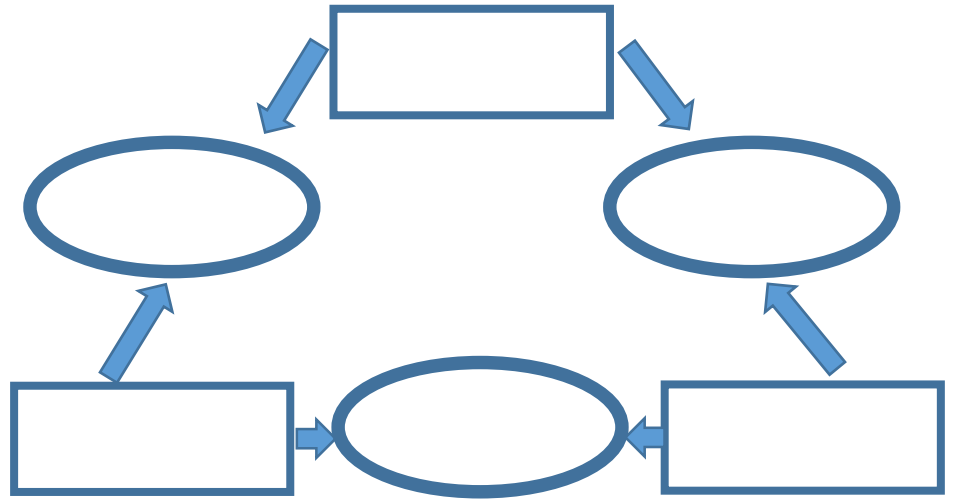

Two numbers have a difference of 2·38. What could the numbers be if:

- the two numbers add up to 6?
- one of the numbers is three times as big as the other number?

Two numbers have a difference of 2·3. To the nearest 10, they are both 10.
What could the numbers be?

A box of labels costs £63.
There are 140 sheets in the box.
There are 15 labels on each sheet.
Sara, Ramesh and Trevor want to calculate the cost of one label, in pence.
Ramesh uses the number sentence (6300 ÷ 140) × 15.
Sara uses the number sentence 63 ÷ 1·4 ÷ 15.
Trevor uses the number sentence (15 × 140) ÷ 6300.

Who is using the right number sentence? Explain your choice.

A shop sells boxes of chocolates costing £2·60. The shop also sells packets of sweets. One packet costs £1·39. Ramesh has a £10 note and he wants to buy one box of chocolates.

Sara says that Ramesh can work out how many packets of sweets he can buy using the number sentence 10 – 2·60 ÷ 1·39.

Do you agree or disagree with Sara?

If you disagree, what number sentence do you think Ramesh should use?

Explain your reasoning.