At its core, a mastery approach rejects the idea that some children simply ‘can’t do maths’.

Excellence in mathematics at CJS
Dan Breeze – Maths Lead

‘Our aim at CJS is to ensure that our children are confident mathematicians who are able to apply their mathematical knowledge and skills to all areas of the primary curriculum and to real life contexts’

High quality teaching and learning

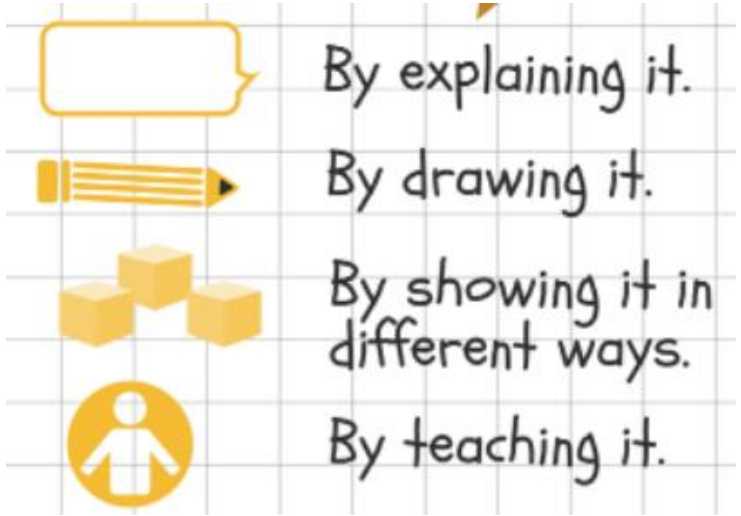
Maths No Problem

Practice opportunities

What is ‘teaching for mastery’?

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

Mastering maths means pupils acquiring a deep, long-term, secure and adaptable understanding of the subject.



For example, how should this be taught?

$$\frac{2}{3} \text{ of } 18 = ?$$

$\frac{2}{3}$ of 18 = ?

- Divide 18 by 3 (6)
- Multiply the result by 2
- The answer is 12

Teach by method

This will get a correct answer but there is little understanding of why the method works.

$\frac{2}{3}$ of 18 = ?

Teach by method

6 months later

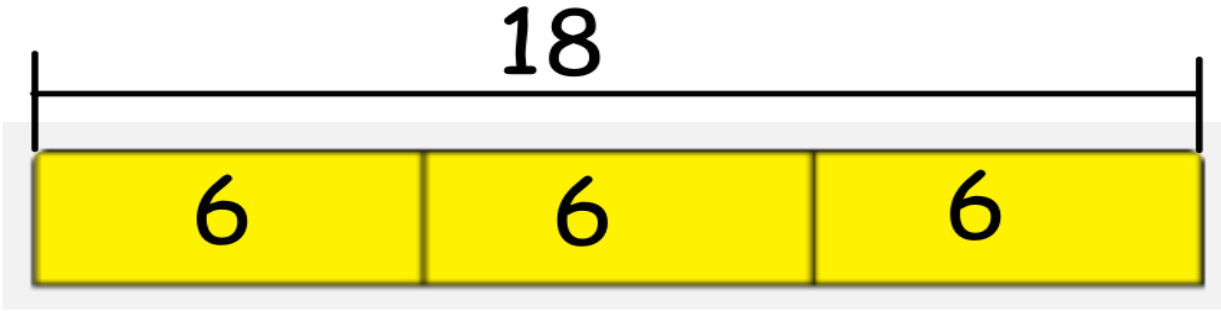
I can't remember whether to divide by the two or the three to start. They both seem equally valid..

$\frac{2}{3}$ of 18 = ?

Teaching for mastery

What is a third?

Concrete



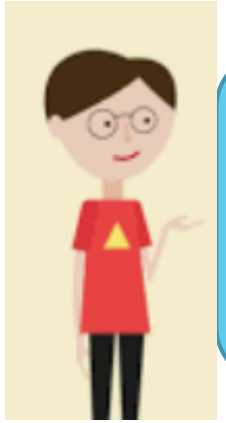
Pictorial

$\frac{2}{3}$ of 18 = 12

Abstract

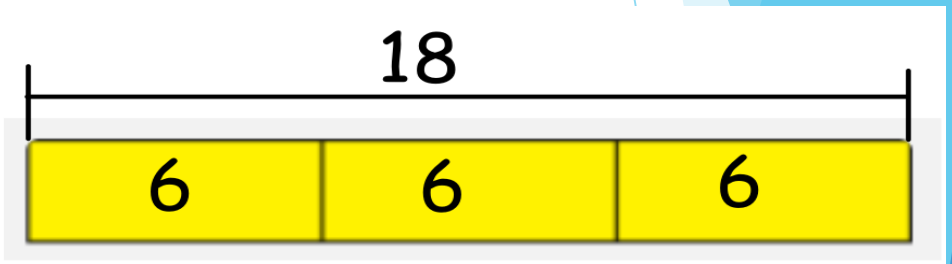
Teaching for mastery uses concrete resources and pictures to develop a deep understanding before moving on to the abstract (known as the 'CPA Approach').

This is called the numerator. It represents how many equal parts we have (2 x 6 = 12)



I have mastered these key concepts :

$$\frac{2}{3}$$



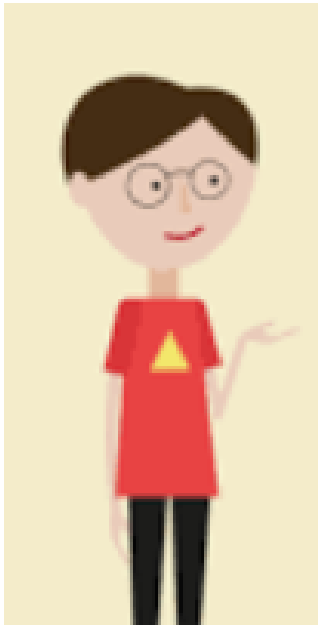
This is called the denominator. It represents how many equal parts the whole (18) is divided into.

A child who has achieved mastery should be able to thoroughly explain these concepts and accurately use key vocabulary.

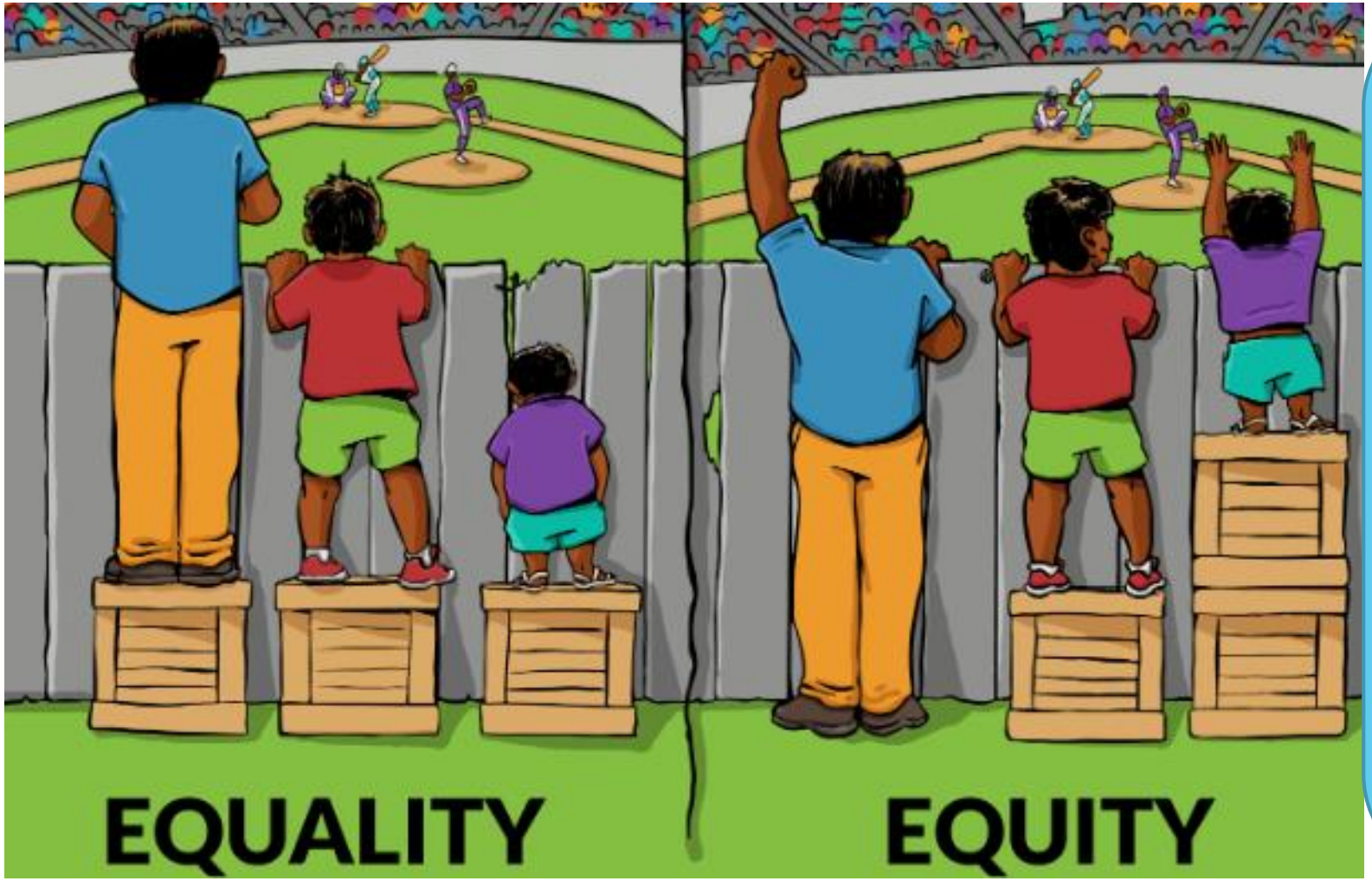
$\frac{2}{3}$ of 18 = ?

Teach for mastery

6 months later



I have mastered the concepts of numerators and denominators so I can work out the method if I've forgotten it.



At CJS, we strive for equity of opportunity for all our pupils.

SEND

Greater Depth

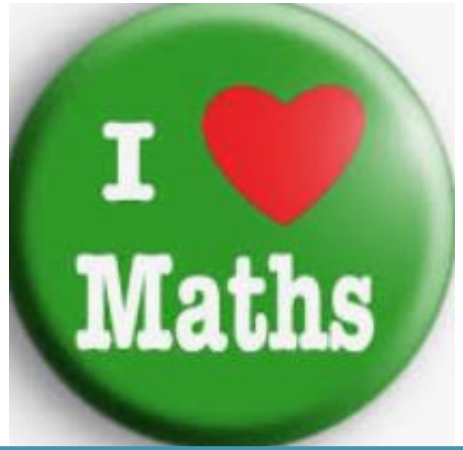
Enrichment

Pupil Voice

How can I help my child with their maths?

You don’t have to be :

A professor of mathematics

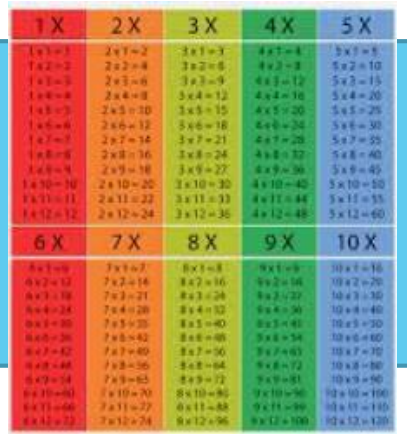


Someone who loves the subject.

Someone with loads of time to spare every week.

Top three ways to help your children with their maths :

Times tables



Telling the time and using it in everyday contexts

Being positive about the subject.

If your child reaches Year 6 knowing these things, they have a great platform to build on :

Times tables

Number bonds to 20

Place Value

Formal methods with the four operations

Basic fluency in fractions

Times Tables

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

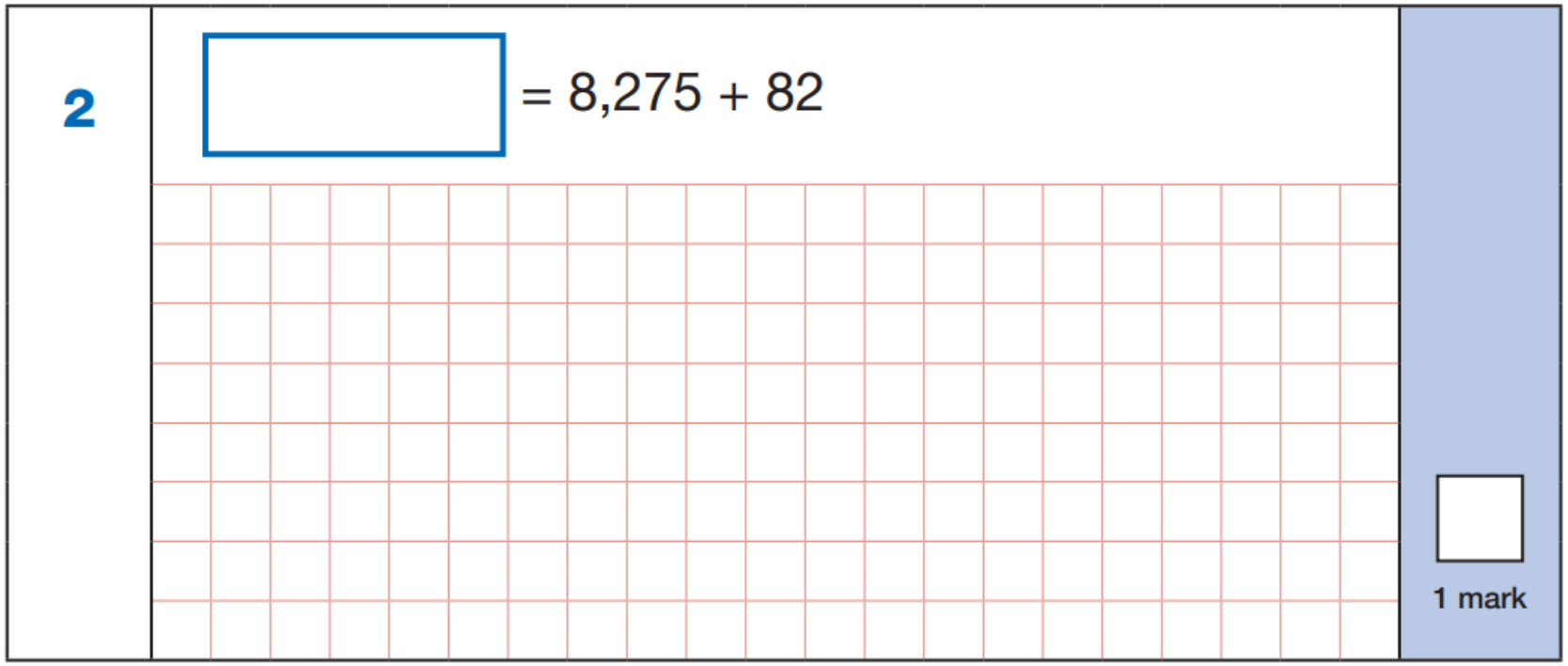
Here is an example of an end of Year 6 SATs test question that requires this key skill.

5 $9 \times 41 =$

1 mark

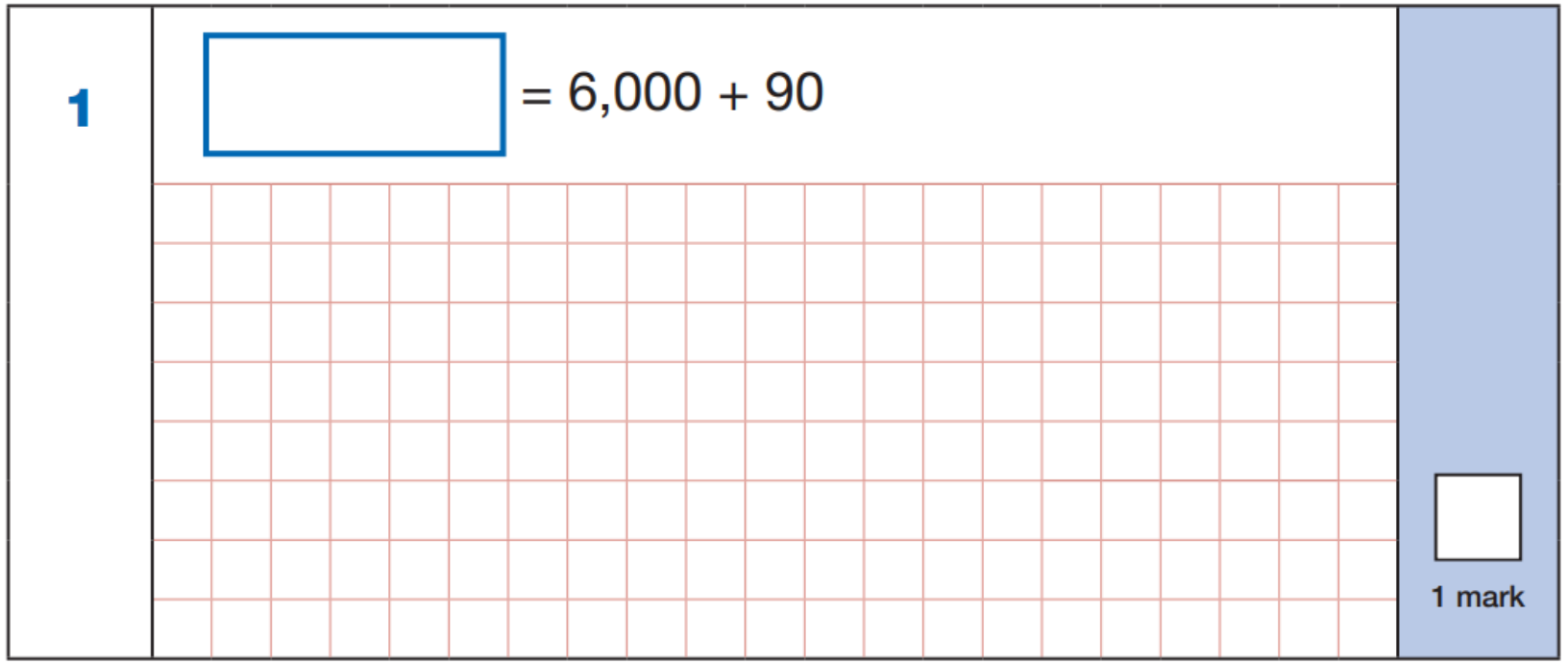
Number bonds to 20

Here is an example of an end of Year 6 SATs test question that requires this key skill.



Place Value

Here is an example of an end of Year 6 SATs test question that requires this key skill.



Formal methods with the four operations

Here are examples of end of Year 6 SATs test questions that require these key skills.

2 ☐ = 8,275 + 82

1 mark

13 1,210 ÷ 11 = ☐

1 mark

23 836 × 27

Show your method

2 marks

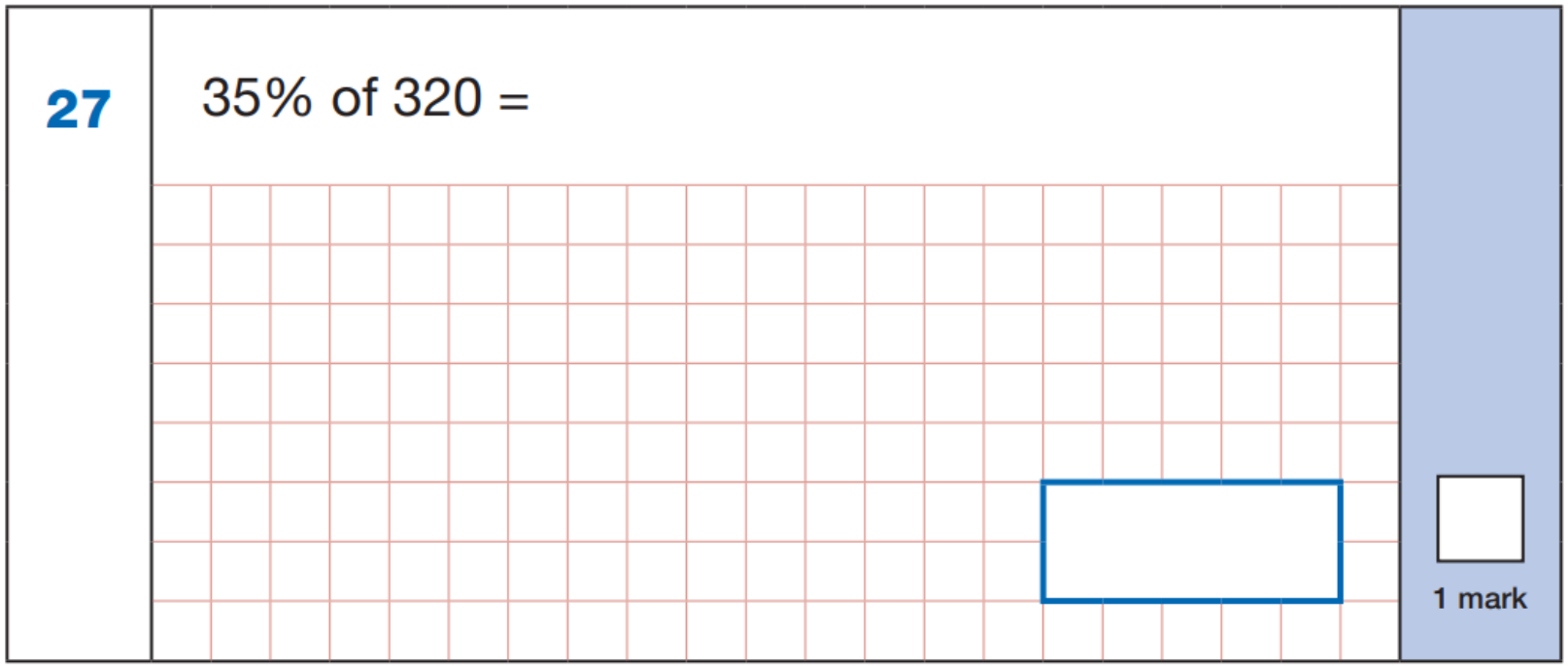
25 37 | 8888

Show your method

2 marks

Basic fluency in fractions

Here is an example of an end of Year 6 SATs test question that requires these key skills.



Teaching Mathematics for Mastery

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

https://www.ncetm.org.uk/teaching-for-mastery/

Want to know more?

Concrete Pictorial Abstract (CPA) Approach

MATHS NO PROBLEM!

https://mathsnoproblem.com/en/approach/concrete-pictorial-abstract/