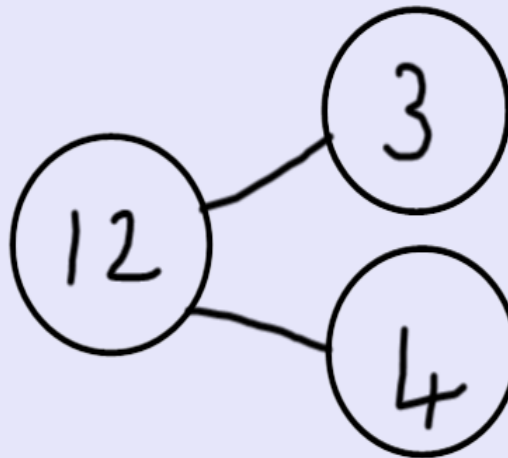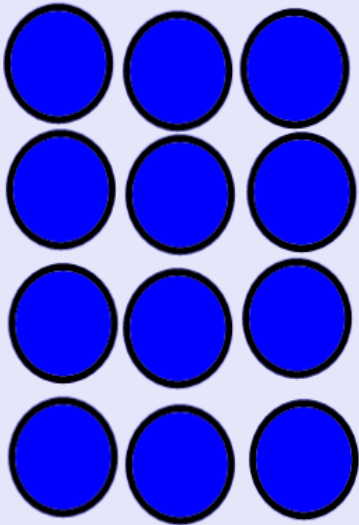1839 † Bures School

Key Stage 1 and 2 Maths SATs

A School Presentation to Parents

Information and Guidance on the Expectations for 2018

- Is it sometimes, always or never true that Prime numbers are always odd?

- What's the same and what's different?

$$3 \times 4 = 12$$

Key Stage 1 National Curriculum Assessments

- In 2014, a new national curriculum framework was introduced by the Government for Years 1, 3, 4 and 5. However, Years 2 and 6 (due to statutory testing) continued to study the previous curriculum for one further year.

- However, in 2015/2016, children in Year 2 and Year 6 were also expected to study the new national curriculum.

- In the summer of 2016, KS1 (Year 2) and KS2 SATs (Year 6) reflected the new curriculum for the first time.

- At present KS1 are required to undertake yearly SATs until 2023 when they will become non-statutory. In KS2 there will continue to be yearly tests. At the moment KS1 tests are marked internally in the school and form part of the teacher judgement for pupil outcomes at the end of Year 2.

- In KS2 tests are externally marked and judgements for pupil outcomes are based purely on the basis of the test results in all areas except writing. Therefore in Maths, teacher judgements for KS2 are not taken into consideration.

Assessment and Reporting

- In recent years, 'old' national curriculum levels (e.g. Levels 1, 2, 3) have been abolished as set out in the government guidelines. Children are now described as working towards, working at and working at greater depth according to the Year 2 expectations of the new curriculum.

- The new curriculum is more rigorous and sets high expectations, which all schools have had to work hard to meet in the last two years.

Mathematics in KS1

In KS1 Children will sit two tests: **Paper 1 and Paper 2:**

- **Paper 1: Arithmetic** – lasts approximately 20 minutes (but this is not strictly timed). It covers calculation methods for all operations.

- **Paper 2: Reasoning** – lasts for approximately 35 minutes, which includes time for five aural questions. Pupils will still require calculation skills and questions will be varied including multiple choice, matching, true/false, completing a chart or table or drawing a shape. Some questions will also require children to show or explain their working out.

Mathematics in KS1

In KS1 if children progress too quickly onto formal methods, they do not have the time to secure their conceptual understanding so they only know how to answer a question using a process. A common misconception is:

100 – 99 =

If children go wrong with this method, the answer is completely wrong, so unless children have conceptual understanding they do not realise they have made a mistake.
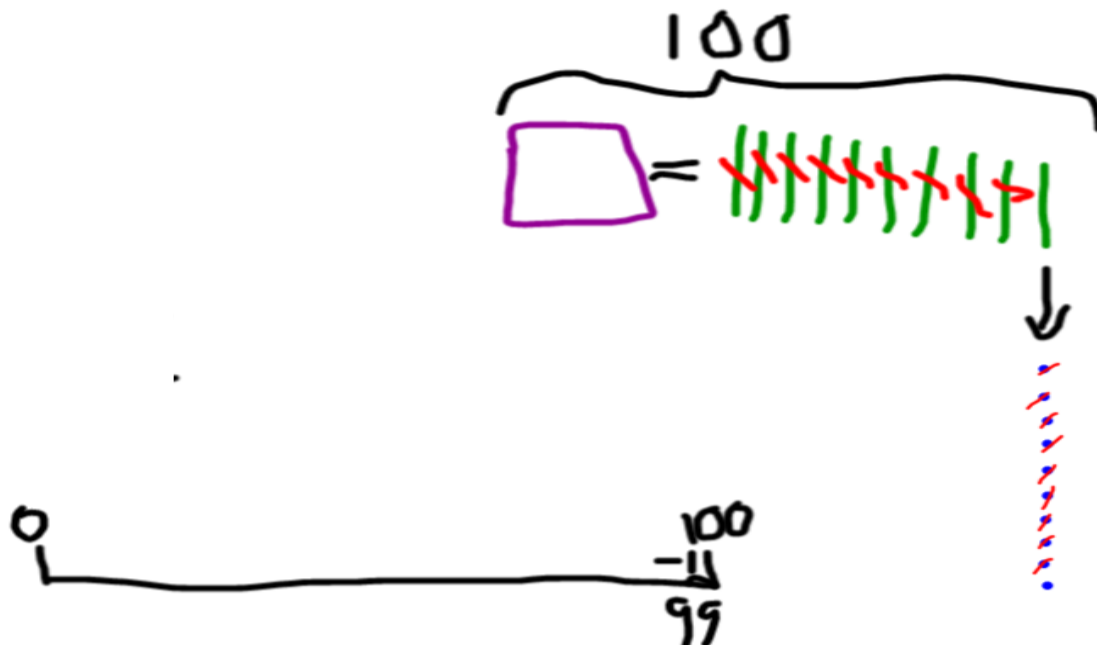
Maths: Sample Questions

Maths Paper 1: Arithmetic

15 $3 \times 3 = $ ⬜

16 $12 \div 2 = $ ⬜

Maths: Sample Questions

3 x 3 = 9
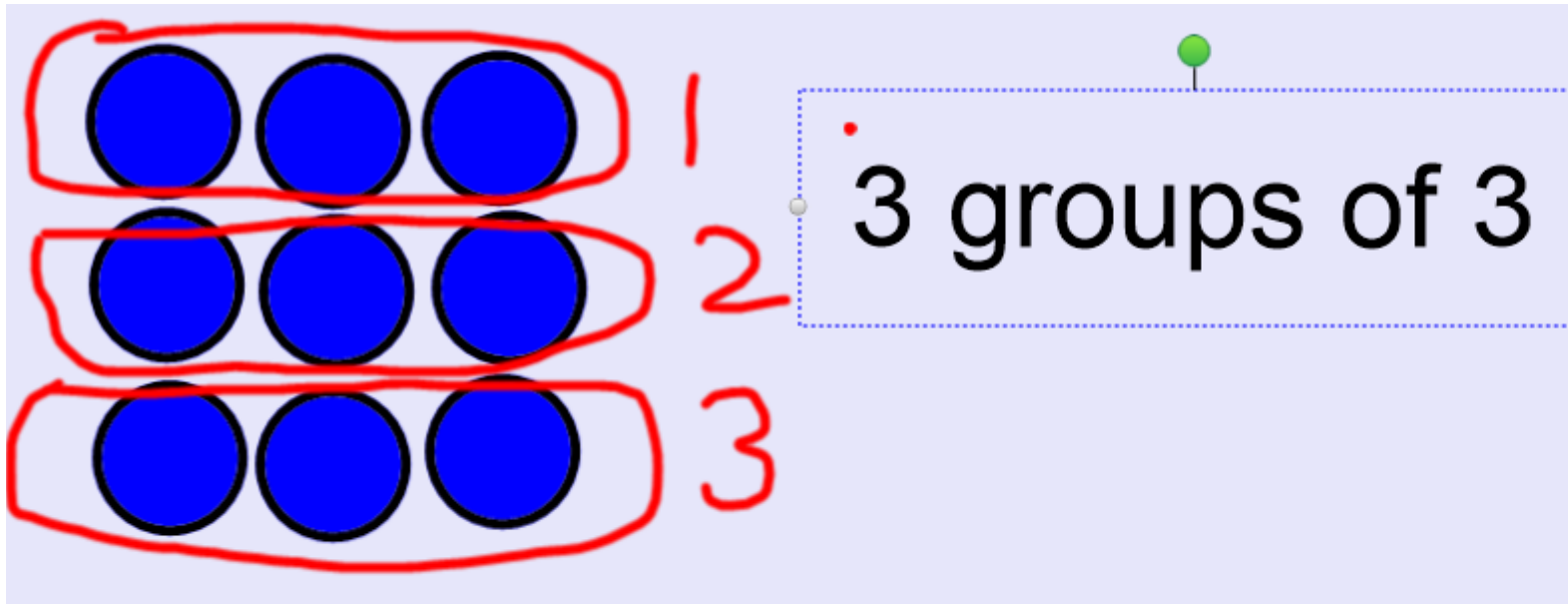
3 groups of 3

Maths: Sample Questions

3 x 3 = 9
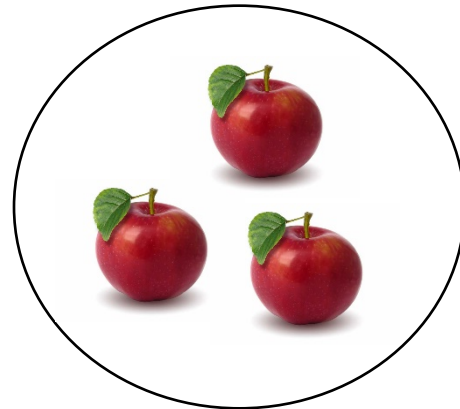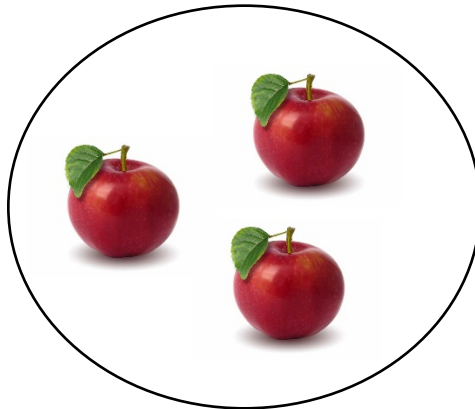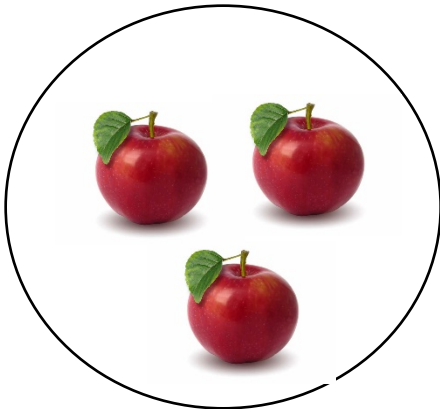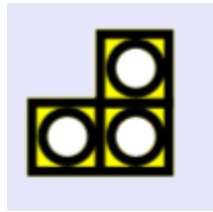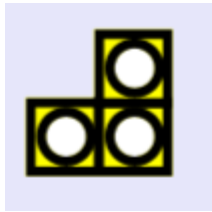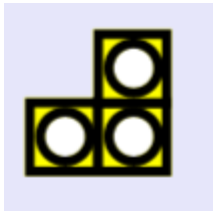
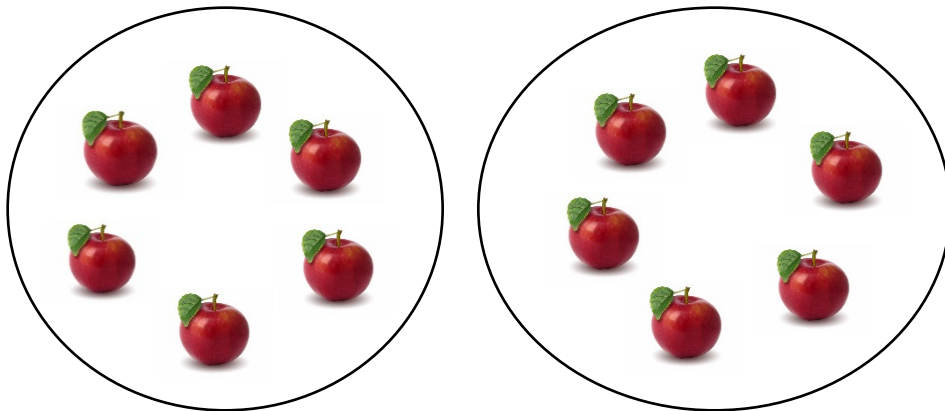# Maths: Sample Questions

12 ÷ 2 = 6

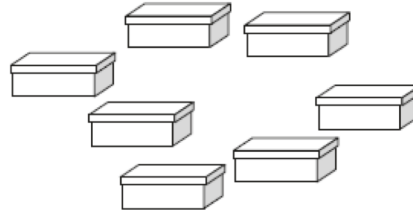Grouping – 6 groups of 2

Sharing – 6 in each of the 2 groups

Maths: Sample Questions

Maths Paper 2: Reasoning

7

Sita puts **2** shoes in each of these boxes.

How many shoes are there altogether?

shoes

8 Complete the table.

words	digits
thirty-eight	38
	40
ninety-four	

Maths: Sample Questions

Maths Paper 2: Reasoning

7
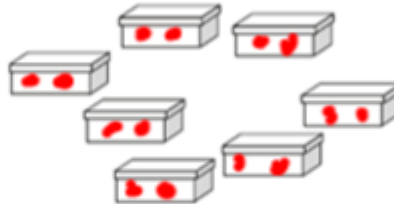
Sita puts **2** shoes in each of these boxes.

How many shoes are there altogether?

14 shoes

8 Complete the table.

words	digits
thirty-eight	38
	40
ninety-four	

Maths: Sample Questions

Maths Paper 2: Reasoning

27 Sita has **50** raisins.

She gives **23** to Ben.

She gives **15** to Amy.

RAISINS

How many raisins does Sita have left?

Show your working

_____ raisins
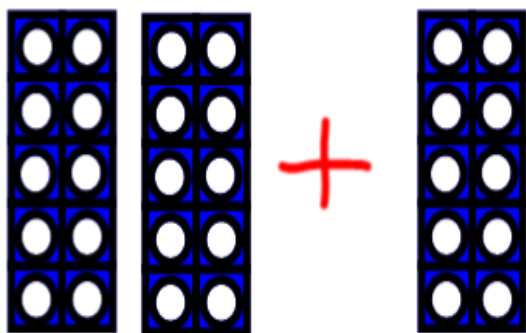
2 marks

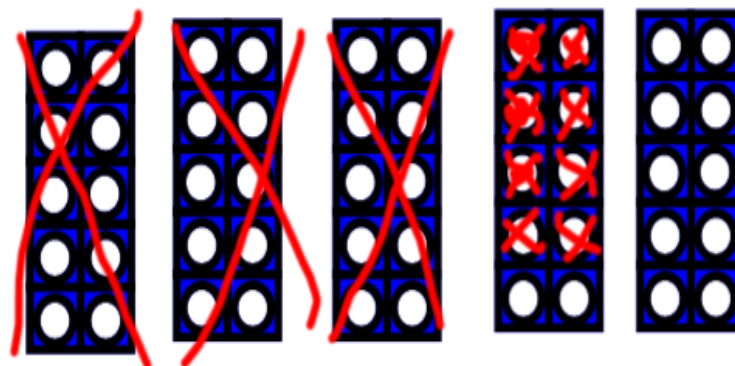# Maths: Sample Questions

50 - 23 - 15 =

23 + 15 = 38

50 - 38 =

2 + 10 = 12

10 + 2 = 12

Mathematics In KS2

- In KS2 the mathematics tests have undergone the biggest change in recent years.

- Children will sit three tests: paper 1, paper 2 and paper 3.

- Paper 1 is for arithmetic lasting for 30 minutes, covering calculation methods for all operations, including use of fractions, percentages and decimals.

- Questions gradually increase in difficulty. Not all children will be expected to access some of the more difficult questions later in the paper.

- Papers 2 and 3 cover problem solving and reasoning, each lasting for 40 minutes.

- Pupils will still require calculation skills but will need to answer questions in context and decide what is required to find a solution.

Mathematics In KS2

- In last year's SATs only 48% of children answered this question correctly:

- $1 \frac{1}{2} \times 57 = 85\frac{1}{2}$ or 85.5 or $\dfrac{171}{2}$

- Why? – because many children did not understand the question conceptually.

- $1 \times 57 = 57$
- $\frac{1}{2}$ of $57 = 25 + 3.5 = 28.5$
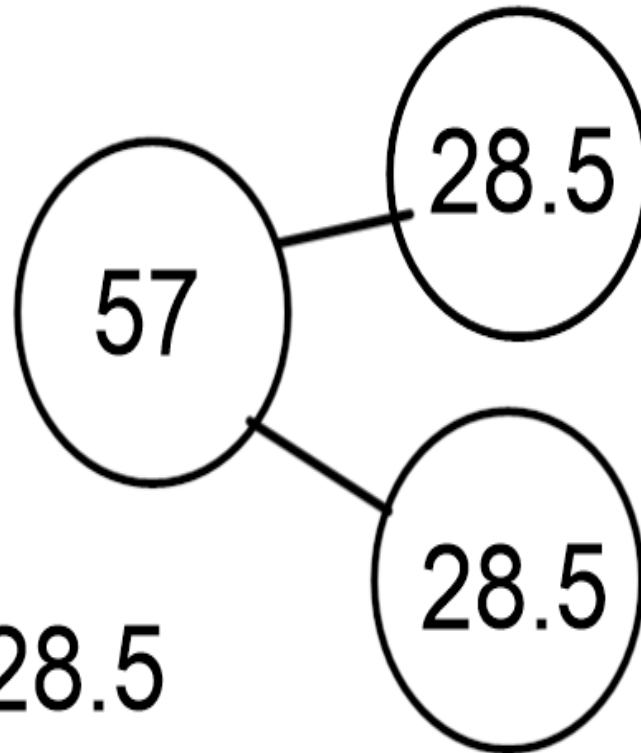- $57 + 28.5 =$
- Or $\frac{1}{2} \times 57 = \quad + 57$
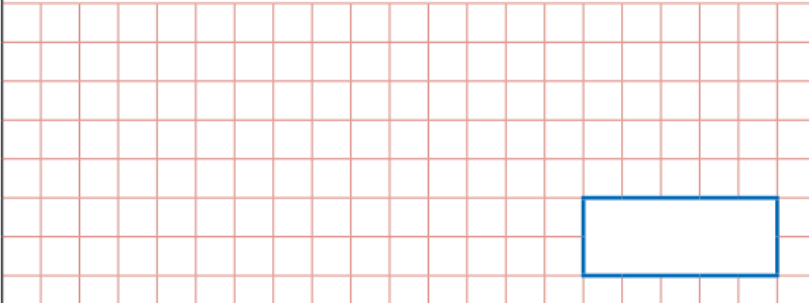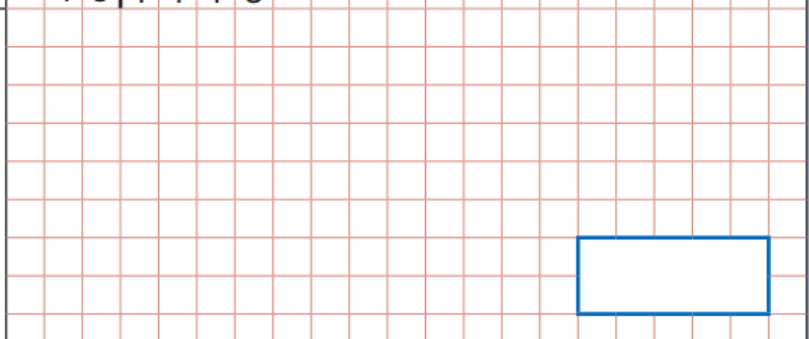
$$57 \div 2 = 28.5$$

Sample Questions

Maths Paper 1: Arithmetic

14 $3.005 + 6.12 =$

1 mark

32

$$4\ 3\ \overline{)\ 1\ 1\ 1\ 8}$$

Show your method

2 marks

Sample Questions

Maths Paper 1: Arithmetic

14   3.005 + 6.12 =

$$
\begin{array}{r}
3\ .\ 0\ 0\ 5 \\
+\ 6\ .\ 1\ 2\ 0 \\
\hline
9\ .\ 1\ 2\ 5 \\
\hline
\end{array}
$$

1 mark

Sample Questions

Maths Paper 1: Arithmetic

32

| 4 | 3 | 1 | 1 | 1 | 8 |

Show your method

$$43 \overline{)1118} \quad \frac{26}{}$$

$$-86$$
$$258$$
$$-258$$
$$0$$

$2\times$

$$43 \times 6$$
$$\underline{258}$$
$$1$$

Sample Questions

Maths Paper 2 / Paper 3 : Reasoning

9

6 pencils cost **£1.68**
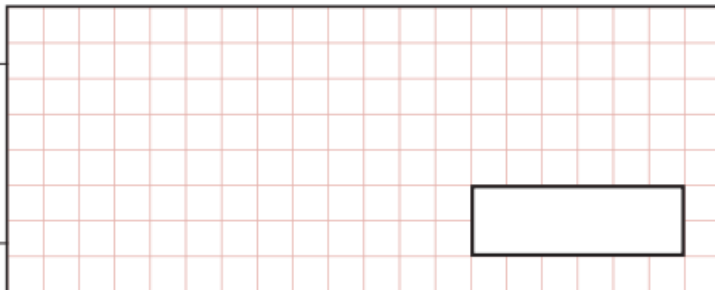
3 pencils and 1 rubber cost **£1.09**
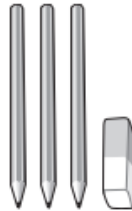
What is the cost of **1 rubber**?

Show your method

2 marks
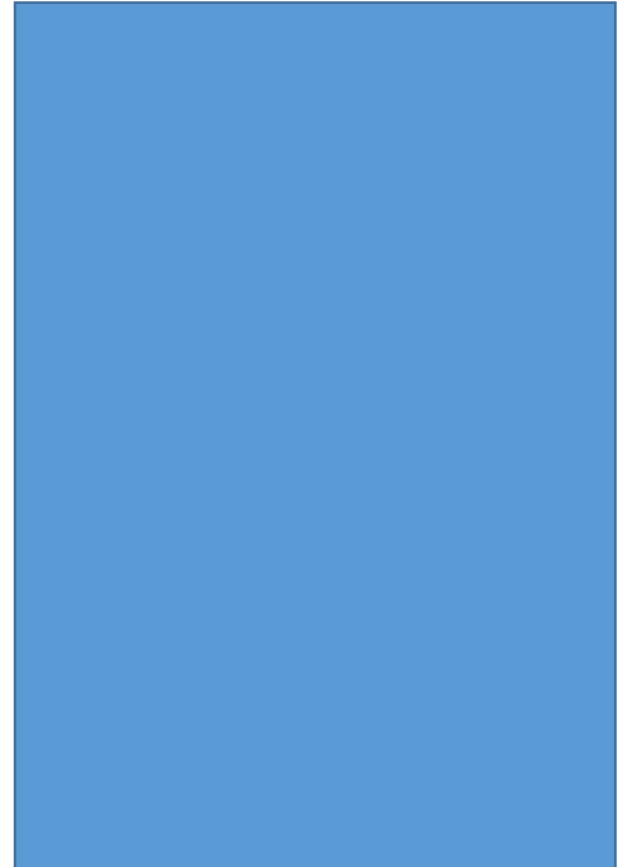
Maths Paper 2 / Paper 3 : Reasoning

£1.68 divided by 6
=

168 ÷ 6 =

Then divide the answer by 100.

Next multiply the answer by 3 to get the cost of 3 pencils.

Finally take this away to get the cost of the rubber.

$$6\overline{\smash{)}1^16^48} = 028$$

$$28 \div 100 = 0.28$$

or 28p

$$\begin{array}{r} 28 \\ \times\ 3 \\ \hline 8\ 4 \\ 2 \end{array}$$

$$\begin{array}{r} \overset{\,1\,0}{\cancel{1.09}} \\ -0.84 \\ \hline 0.25 \end{array}$$ or 25p

Sample Questions

Maths Paper 2 / Paper 3 : Reasoning

21 $5{,}542 \div 17 = 326$

Explain how you can use this fact to find the answer to **18 × 326**

> If 5,542 divided by 17 is 326 then the inverse would be 17 multiplied by 326 to give 5,542. Therefore by adding 326 to this total would give the answer to 18 x 326 as it is one multiple of 326 more.

1 mark

Higher-Attaining Pupils

- In the past, Key Stage 2 tests were aimed at children achieving levels 3-5 (with a national expectation to reach at least level 4).

- This meant that additional level 6 tests were produced for children who demonstrated higher than expected attainment (above level 5).

- Under the new system, there are not any separate tests for the most-able children.

- Instead, each test will have scope for higher-attaining pupils to show their strengths.

- This means that some questions towards the end of the tests may be more difficult for many children but they should be encouraged to attempt as much of the test as they are able to.

Maths Teaching at Bures Primary

- As a school we are developing at 'Mastery' approach to Mathematics. This is being rolled out across the school this year, with a focus on KS1 and LKS2. Mastery is defined by the NCETM (National Centre for the Excellence of Teaching in Mathematics) as an approach in which:

- Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics.

- The large majority of pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention.

- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.

- Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up.

Maths Teaching at Bures Primary

- The intention of these approaches is to provide all children with full access to the curriculum, enabling them to achieve confidence and competence – 'mastery' – in mathematics, rather than many failing to develop the maths skills they need for the future.

- Here is an example of Mastery in action in Year 2:

- https://vimeo.com/83486226

How to Help Your Child with Maths

- Play times tables games.

- Play mental maths games including counting in different amounts, forwards and backwards.

- Encourage opportunities for telling the time.

- Encourage opportunities for counting coins and money e.g. finding amounts or calculating change when shopping.

- Look for numbers on street signs, car registrations and anywhere else.

- Look for examples of 2D and 3D shapes around the home.

- Identify, weigh or measure quantities and amounts in the kitchen or in recipes.

- Play games involving numbers or logic, such as dominoes, card games, draughts or chess.

Any questions?

Thank you for listening.