

Ma

KEY STAGE

3

LOWER TIER  
TEST C

Mathematics tests

# Mental mathematics

Test C transcript

## CONFIDENTIAL MATERIAL ENCLOSED

THIS BOOKLET CONTAINS CONFIDENTIAL TEST QUESTIONS –  
IT MUST BE KEPT SECURE. IT SHOULD NOT BE OPENED UNTIL  
THE MENTAL MATHEMATICS TEST IS DUE TO START ON

**WEDNESDAY 9 MAY 2007.**

EARLY OPENING, UP TO ONE HOUR BEFORE THE TEST  
STARTS, IS PERMISSIBLE ONLY IF PAPERS ARE NEEDED FOR  
ADMINISTRATIVE PURPOSES.

This booklet contains a transcript of the key stage 3 mental mathematics test C. It should be used **ONLY** in cases of CD failure or for specific special arrangements outlined in the *2007 Assessment and reporting arrangements* booklet for key stage 3.

2007

# Notes for use of transcript

## Instructions

In the event of CD failure, the test administrator should follow the instructions on pages 2 and 5.

1. Pupils should have only pens or pencils. They should not have rubbers, rulers, calculators or any other mathematical equipment. Access to paper for working out answers is **not allowed**.
2. Ensure that each pupil has an answer sheet. Tell the pupils to write their name and school in the box at the top of the answer sheet.
3. Ensure the pupils understand that:
  - they must complete the test on their own without copying or discussing questions with other pupils
  - they will be told how long they have to answer each question and that the time given will increase from 5, to 10, to 15 seconds as the test progresses through the three sections
  - for some of the questions, the information they will need is included in or beside the answer box on the pupil answer sheet
  - they are not allowed to use a calculator or any other mathematical equipment
  - if they want to change their answer, they should put a cross through their first answer. They are not allowed to rub out any answers
  - they should answer as many questions as they can. If they find a question too difficult, they should put a cross in the answer box and wait for the next question
  - they should not write in the white boxes in the blue margins
  - they will not be allowed to ask any questions once the test has started.
4. The test administrator must have access to a clock or watch that measures accurately in seconds.

Instructions continued on page 5

## Lower tier test C questions

'Now we are ready to start the test.'

For the first group of questions you will have 5 seconds to work out each answer and write it down.'

1	What is seventeen pounds eighty-five pence rounded to the nearest pound?
2	What number multiplied by five makes forty?
3	Look at the list of numbers on your answer sheet. What number is the mode?
4	Write in figures the number two thousand and twenty.
5	How many centimetres are seventy millimetres?
6	Write a number that is more than nought point one but less than nought point two.
7	I am thinking of a number. I call it $n$ . I add eight to my number. Write an expression to show the result.
8	Look at the fraction. Write down a different fraction that is equivalent to four-fifths.

'For the next group of questions you will have 10 seconds to work out each answer and write it down.'

9	I start at forty and count down in equal steps. Forty, thirty-seven, thirty-four ... What are the next two numbers?
10	The bar chart shows the eye colours of some pupils. How many of the pupils have blue eyes?
11	Shade one quarter of the square on your answer sheet.
12	I face north. I turn through half a turn. What direction am I facing after the turn?
13	Add the numbers on your answer sheet.
14	Look at your answer sheet. Estimate the length of the line in centimetres.
15	What is half of twenty-three?

'Now turn over your answer sheet.'

## Pupil answer sheet

Key stage 3 mathematics 2007

Mental mathematics Test C

First name \_\_\_\_\_

Last name \_\_\_\_\_

School \_\_\_\_\_

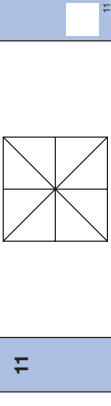
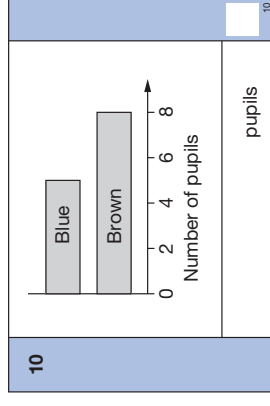
Total marks

Time: 5 seconds continued

7	<input type="text"/>	$n$	<input type="text"/>
8	<input type="text"/>	$\frac{4}{5}$	<input type="text"/>

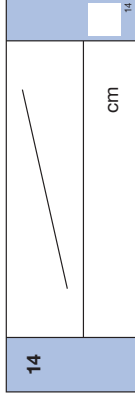
Time: 10 seconds

9	40, 37, 34, _____, _____	<input type="text"/>
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12	<input type="text"/>	North	<input type="text"/>
----	----------------------	-------	----------------------

13	<input type="text"/>	54	66	<input type="text"/>
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15	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Practice question

<input type="text"/>	195
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Time: 5 seconds

1	£	£17.85	<input type="text"/>
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2	<input type="text"/>	5	40	<input type="text"/>
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3	7	5	8	4	5	<input type="text"/>
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4	<input type="text"/>	<input type="text"/>	<input type="text"/>
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5	cm	70mm	<input type="text"/>
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6	<input type="text"/>	0.1	0.2	<input type="text"/>
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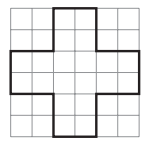
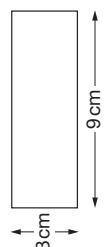
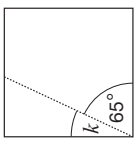
16	In a survey, people were asked if they would prefer a cat or a dog for a pet. The pictogram shows the results. Six people said cat. How many people said dog?
17	I have a bag of twenty pence coins. Altogether I have seven pounds. How many twenty pence coins do I have?
18	Look at the equation. What is the value of $y$ when $x$ is twelve?
19	Look at the shape drawn on the square grid. How many lines of symmetry does it have?
20	Magazines cost one pound and forty pence each. I buy two of the magazines. How much change do I get from a ten pound note?
21	At sunrise the temperature was minus three degrees Celsius. By midday, the temperature had increased by twelve degrees. What was the temperature at midday?
22	Look at the rectangle. What is its area?
23	There are three red balls and two blue balls in a bag. I am going to take a ball out of the bag at random. What is the probability that the ball will be red?
24	The diagram shows a line inside a square. What is the size of angle $k$ ?

**'For the next group of questions you will have 15 seconds to work out each answer and write it down.'**


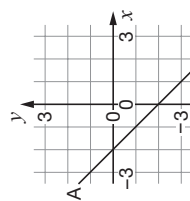
25	Look at the price list. I buy one notebook, one ruler and one pencil. Altogether, how much do they cost?
26	The number one is a factor of both fifteen and twenty-four. What other number is a factor of both fifteen and twenty-four?
27	Your answer sheet shows the percentages of pupils born in different seasons for class A. The percentage for winter is missing. Fill in the percentage of class A that was born in winter.
28	Look at the scale. About what value is the arrow pointing to?
29	Your answer sheet shows the answer to twenty-eight multiplied by sixteen. Use this information to help you work out the answer to twenty-eight multiplied by thirty-two.
30	Look at the graph on your answer sheet. Write down the coordinates of any point on the line marked A.

**'Put your pens down. The test is finished.'**

**Time: 10 seconds continued**

16	<table border="1"> <tr> <td>Cat</td> <td>●</td> <td>●</td> <td>●</td> </tr> <tr> <td>Dog</td> <td>●</td> <td>●</td> <td>●</td> </tr> </table> people	Cat	●	●	●	Dog	●	●	●	16
Cat	●	●	●							
Dog	●	●	●							
17	£7	17								
18	$y = x - 7$	18								
19		19								
20	£	£1.40	20							
21	°C	-3°C	21							
22	 cm <sup>2</sup>	22								
23	3 red	2 blue	23							
24		24								

**Time: 15 seconds**

25	<table border="1"> <tr> <td>Notebook</td> <td>£1.05</td> </tr> <tr> <td>Ruler</td> <td>65p</td> </tr> <tr> <td>Pencil</td> <td>40p</td> </tr> <tr> <td>£</td> <td></td> </tr> </table>	Notebook	£1.05	Ruler	65p	Pencil	40p	£		25
Notebook	£1.05									
Ruler	65p									
Pencil	40p									
£										
26	15	24	26							
27	<table border="1"> <tr> <td>Spring</td> <td>30%</td> </tr> <tr> <td>Summer</td> <td>22%</td> </tr> <tr> <td>Autumn</td> <td>28%</td> </tr> <tr> <td>Winter</td> <td>%</td> </tr> </table>	Spring	30%	Summer	22%	Autumn	28%	Winter	%	27
Spring	30%									
Summer	22%									
Autumn	28%									
Winter	%									
28	 kg	28								
29	$28 \times 16 = 448$ $28 \times 32 =$	29								
30	 ( , )	30								

5. Read out the following script, using exactly these words:

*Listen carefully to the instructions I am going to give you. After I have finished reading them, there will be time for you to ask any questions you might have. However, you will not be able to ask any questions once the test has begun.*

*I will start by reading a practice question. Then I am going to ask you 30 questions for the test. On your sheet there is an answer box for each question, where you should write the answer to the question and nothing else. You should work out the answer to each question in your head, but you may jot things down outside the answer box if this helps you. Do not try to write down your calculations because this will waste time and you may miss the next question. For some of the questions, important information is already written down for you on the sheet.*

*I will read out each question twice. Listen carefully both times. You will then have time to work out your answer. If you cannot work out an answer, put a cross in the answer box. If you make a mistake, cross out the wrong answer and write the correct answer next to it. There are some easy and some harder questions so don't be put off if you cannot answer a question.*

6. Stop and answer any questions that the pupils may have.

7. Read out the following:

*Here is the practice question to show you what to do.*

*I will read the question twice, and you will have 5 seconds to work out the answer and write it in the answer box.*

*Add ten to the number on your answer sheet.*

Repeat the question.

*Add ten to the number on your answer sheet.*

Wait 5 seconds (measured accurately using a clock or watch), then read out the following:

*Now put down your pen or pencil.*

8. Ensure that the pupils have correctly placed their answers to the practice question on their answer sheets.

Remind the pupils that, for some questions, information is provided in or beside the answer box.

When they are ready to begin the test, tell the pupils that you will not be able to answer any further questions, or interrupt the test, once you have started reading the questions.

9. The questions are given on pages 3–4 of this booklet. The questions must be read out exactly as written.

Start by stating the question number, then read each question twice before leaving the 5, 10 or 15 second response time. **These timings must be strictly adhered to.**

10. At the end of the test, tell the pupils to put down their pens or pencils, then collect their answer sheets.

