

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  
**TUESDAY 6 MAY 2008.**

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 2008 *Assessment and reporting arrangements* booklet for key stage 3.

2008

# 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 | Add sixty-seven and fourteen.                                     |
| 2 | How many sides does an octagon have?                              |
| 3 | Double nineteen.  |
| 4 | Round four thousand two hundred and sixty-six to the nearest ten. |
| 5 | Multiply six by seven.  |
| 6 | Look at the expression. Write it as simply as possible.           |
| 7 | Write one quarter as a decimal.                                   |
| 8 | What is nought point eight multiplied by five?                    |

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

|    |  |
|----|--|
| 9  | Look at the numbers on your answer sheet.<br>Put a ring round the largest number.  |
| 10 | Add together fourteen, fifteen and sixteen.  |
| 11 | Look at the coins.<br>How much money is shown altogether?  |
| 12 | The table shows the price of a journey by train or bus.<br>How much will it cost two adults and one child to make the journey by bus?                                |
| 13 | John went to France on the twenty-fifth of July and returned exactly one week later.<br>On what date did John return?  |
| 14 | The chart shows the number of men and women who work at a factory.<br>One symbol represents twenty-five people.<br>How many more men than women work at the factory? |
| 15 | Subtract three from three squared.   |
| 16 | Sam is facing North. He turns clockwise to face North-East.<br>Through how many degrees does he turn?  |

'Now turn over your answer sheet.'

## Pupil answer sheet

Key stage 3 mathematics 2008  
Mental mathematics Test C

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

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

School \_\_\_\_\_

Total marks

Time: 10 seconds

|   |      |      |      |                      |
|---|------|------|------|----------------------|
| 9 | 2010 | 2001 | 2100 | <input type="text"/> |
|   | 2110 | 2101 |      | <input type="text"/> |

|    |    |    |    |                      |
|----|----|----|----|----------------------|
| 10 | 14 | 15 | 16 | <input type="text"/> |
|----|----|----|----|----------------------|

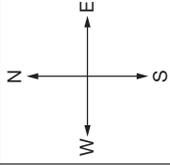
|    |   |                      |
|----|---|----------------------|
| 11 |  | <input type="text"/> |
|    | £   | <input type="text"/> |

|       |  |                      |     |       |       |       |       |  |     |                      |
|-------|--|----------------------|-----|-------|-------|-------|-------|--|-----|----------------------|
| 12    | <table border="1"> <tr> <td>train</td> <td>bus</td> </tr> <tr> <td>adult</td> <td>£2.00</td> </tr> <tr> <td>child</td> <td>£1.00</td> </tr> <tr> <td></td> <td>40p</td> </tr> </table> | train                | bus | adult | £2.00 | child | £1.00 |  | 40p | <input type="text"/> |
| train | bus  |                      |     |       |       |       |       |  |     |                      |
| adult | £2.00  |                      |     |       |       |       |       |  |     |                      |
| child | £1.00  |                      |     |       |       |       |       |  |     |                      |
|       | 40p  |                      |     |       |       |       |       |  |     |                      |
|       | £  | <input type="text"/> |     |       |       |       |       |  |     |                      |

|    |                      |           |                      |
|----|----------------------|-----------|----------------------|
| 13 | <input type="text"/> | 25th July | <input type="text"/> |
|----|----------------------|-----------|----------------------|

|       |  |                      |  |       |   |                      |
|-------|--|----------------------|--|-------|---|----------------------|
| 14    | <table border="1"> <tr> <td>men</td> <td></td> </tr> <tr> <td>women</td> <td></td> </tr> </table> | men                  |  | women |  | <input type="text"/> |
| men   |    |                      |  |       |   |                      |
| women |   |                      |  |       |   |                      |
|       | $\text{Symbol} = 25 \text{ people}$  | <input type="text"/> |  |       |   |                      |

|    |                      |   |       |                      |
|----|----------------------|---|-------|----------------------|
| 15 | <input type="text"/> | 3 | $3^2$ | <input type="text"/> |
|----|----------------------|---|-------|----------------------|

|    |                      |   |                      |
|----|----------------------|---|----------------------|
| 16 | <input type="text"/> |  | <input type="text"/> |
|----|----------------------|---|----------------------|

Practice question

|                      |                      |    |                      |
|----------------------|----------------------|----|----------------------|
| <input type="text"/> | <input type="text"/> | 49 | <input type="text"/> |
|----------------------|----------------------|----|----------------------|

Time: 5 seconds

|   |                      |    |    |                      |
|---|----------------------|----|----|----------------------|
| 1 | <input type="text"/> | 67 | 14 | <input type="text"/> |
|---|----------------------|----|----|----------------------|

|   |                      |                      |                      |                      |
|---|----------------------|----------------------|----------------------|----------------------|
| 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
|---|----------------------|----------------------|----------------------|----------------------|

|   |                      |    |                      |
|---|----------------------|----|----------------------|
| 3 | <input type="text"/> | 19 | <input type="text"/> |
|---|----------------------|----|----------------------|

|   |                      |      |                      |
|---|----------------------|------|----------------------|
| 4 | <input type="text"/> | 4266 | <input type="text"/> |
|---|----------------------|------|----------------------|

|   |                      |   |   |                      |
|---|----------------------|---|---|----------------------|
| 5 | <input type="text"/> | 6 | 7 | <input type="text"/> |
|---|----------------------|---|---|----------------------|

|   |                      |           |                      |
|---|----------------------|-----------|----------------------|
| 6 | <input type="text"/> | $7k - 4k$ | <input type="text"/> |
|---|----------------------|-----------|----------------------|

|   |                      |               |                      |
|---|----------------------|---------------|----------------------|
| 7 | <input type="text"/> | $\frac{1}{4}$ | <input type="text"/> |
|---|----------------------|---------------|----------------------|

|   |                      |     |   |                      |
|---|----------------------|-----|---|----------------------|
| 8 | <input type="text"/> | 0.8 | 5 | <input type="text"/> |
|---|----------------------|-----|---|----------------------|

|    |  |
|----|--|
| 17 | Look at the temperature shown on the thermometer.<br>The temperature drops by five degrees Celsius. What is the new temperature? |
| 18 | Eight kilometres is about five miles.<br>About how many miles is twenty-four kilometres?   |
| 19 | Look at the triangle drawn on the grid.<br>Write the coordinates of the point marked A.  |
| 20 | What is the square root of eighty-one?   |
| 21 | Look at the expression. I subtract three from the expression.<br>Write the new expression as simply as possible.                 |

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

|    |  |
|----|--|
| 22 | Your answer sheet shows the cost of three tins of cat food.<br>How much would six of these tins cost?  |
| 23 | I am thinking of a number.<br>The number can be divided by three with no remainder.<br>It can also be divided by four with no remainder.<br>What could my number be?                                     |
| 24 | The bar chart shows how Pete spent some of his day.<br>How many more hours did he spend sleeping than working?   |
| 25 | Look at the triangle and the square.<br>The perimeter of the triangle is the same as the perimeter of the square.<br>What is the side length of the square?  |
| 26 | Look at the sequence of triangular numbers: one, three, six, ten, fifteen.<br>What is the next number in the sequence?   |
| 27 | Ben has one red marble, one green marble and three blue marbles in his pocket.<br>He is going to take one of the marbles out of his pocket without looking.<br>What is the probability it will be green? |
| 28 | Look at the information on your answer sheet.<br>The total mass of the three boxes is two kilograms.<br>What is the mass of box C?   |
| 29 | Twenty-nine multiplied by thirty-four is nine hundred and eighty-six.<br>What is nought point two nine multiplied by thirty-four?  |
| 30 | Look at the diagram. Work out the size of angle $a$ .  |

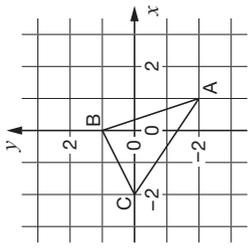
**'Put your pens down. The test is finished.'**

Time: 10 seconds continued

17  °C

18 

|                      |                      |
|----------------------|----------------------|
| 8 km                 | 5 miles              |
| <input type="text"/> | <input type="text"/> |
| <input type="text"/> | miles                |

19 

20 

|                      |             |
|----------------------|-------------|
| <input type="text"/> | $\sqrt{81}$ |
|----------------------|-------------|

21 

|                      |          |
|----------------------|----------|
| <input type="text"/> | $5b + 3$ |
|----------------------|----------|

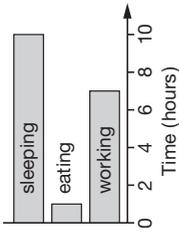
Time: 15 seconds

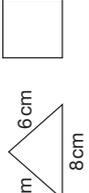
22  3 tins for 99p  
£

23 

|                      |                      |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |
|----------------------|----------------------|

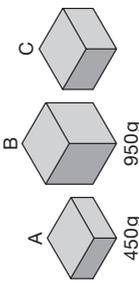
Time: 15 seconds continued

24 

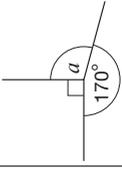
25 

26 1, 3, 6, 10, 15,

27 1 red 1 green 3 blue

28 

29  $29 \times 34 = 986$   
 $0.29 \times 34 =$

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.



# National Assessment Agency

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