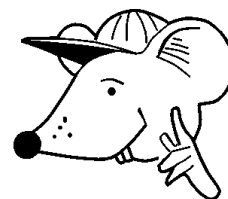


# MATHEMATICS



**Key Stage 2**

**Practice Mental Arithmetic Test B**

## Equipment

Paper and pencil.  
Clock or watch.

# MathSphere

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### **Instructions**

As part of the Year 6 Mathematics tests all children take a short mental arithmetic test. A tape is played in the classroom and the children write down the answers on an answer page. Only a very limited amount of time is given for each question. Children who have met this kind of test before are usually more successful as they are confident with the format and style.

These tests have been devised in order to give children an experience as similar as possible to the Key Stage 2 Mental Arithmetic Test. The following instructions will need to be followed.

1. The test should be carried out somewhere quiet and where the child can write easily and comfortably - no T.V. on in the background! Sitting at a table would be ideal.
2. Children should only have a pen or a pencil and the answer sheet. In the real test they are not allowed to have an eraser, ruler, calculator or any other maths equipment, e.g. 'tables' on the back of a pencil case! Nor are children allowed any working out paper.
3. Children must complete the test on their own, without discussing any of the questions. They are not allowed to ask if a question can be repeated.
4. If they want to change an answer, they should cross out the first answer - they are not allowed to rub out an answer.
5. They will be told how long they have to answer each question. 5 seconds is given for the first section and then the time increases to 10, and then 15 seconds as the test progresses.
6. They should answer as many questions as they can. If they find a question too difficult to answer in the time given they should mark the box with a cross. This will stop the possibility of writing the answers in the wrong boxes.
7. The script should be read out exactly as it is on the following pages, with no undue emphasis on any particular words.
8. Afterwards it would be very worthwhile to give praise for all the correct answers and to look together at one or two of the incorrect answers to try and find quick mental ways of solving them. Too much criticism will lead to more failure!

### **The Script**

#### **Read out the following script, using exactly the words written:**

*Listen carefully to these instructions. When I have finished reading them you may ask questions about the instructions. Once the test has started you will not be able to ask any questions, or ask for a question to be repeated.*

*I will start by reading one practice question. Then I will ask 20 more questions. On your sheet there is an answer box for each question. Write your answers in these white boxes. I will tell you how long you have for each question.*

*You should work out the answer to each question in your head. You may want to write something down to help you. Do this anywhere else on the answer sheet. Do not try and write down sums because you will not have the time to do this.*

*On certain questions some help or information has been given next to the answer box. Use this to help you answer the questions.*

*I will read out the questions twice. Listen carefully. You will then have time to work out your answer in your head and write it down. If you can not work the answer out put a cross in that answer box.*

*If you make a mistake, cross out your mistake and write your new answer clearly, next to it.*

*Some questions are quite easy, some are harder. Do not be put off if you can't answer a question.*

*Any questions about these instructions?*

*Here is the practice question. I will read the question twice and you will have 5 seconds to write down the answer.*

**What is double 24?**

**What is double 24?**

(Wait 5 seconds).      *Now put down your pen.*

(Check that the child is answering in the correct box.    Good luck!!)

### Test questions 1- 10

*The test will start now. For this group of questions you will have 5 seconds to work out the answer to each question and write it down.*

	The questions:	Pupil sheet	
1.	What is double forty-five?		
2.	What is thirty-two more than forty?		32    40
3.	Write the number twenty thousand and sixteen in figures.		
4.	A bag contains only red and blue sweets. One third of the sweets are red. What is the probability of picking a blue sweet out?		
5.	If two angles of a triangle add up to $130^0$ , what will the third angle be?	degrees	
<b><i>For the next set of questions you will have ten seconds to work out each answer and write it down.</i></b>			
6.	Divide nine by three and then add eight.		
7.	An apple costs 19 pence and a banana costs 16 pence. How much do they cost together?	p	19p    16p
8.	The difference between a number and fifty-three is five. What could the number be?		
9.	How many minutes are there in three and a half hours?	minutes	
10.	Look at the equation on your answer sheet. 20 minus n is 14.      What is the value of n ?		$20 - n = 14$

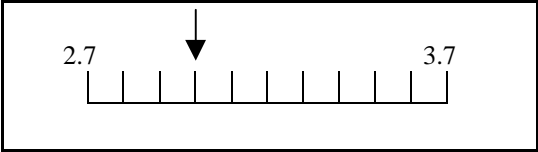
### Test questions 11 - 20

*For this group of questions you will still have 10 seconds to work out the answer to each question and write it down.*

The questions:		Pupil sheet	
11.	What is four hundred and twenty-two centimetres to the nearest metre?	m	
12.	Sam paid six pounds forty for a tape. How much change from £10 would he get?	£	£10    £6.40
13.	Put a ring round the approximate capacity of a tea cup.	2ml          2 litres          2 000ml 200ml          20 litres	
14.	What is half of three point eight?		
15.	On your answer sheet is a scale. What is the number shown by the arrow?	<div><div>2.7</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>3.7</div></div>	
<i>For the next set of questions you will have fifteen seconds to work out each answer and write it down.</i>			
16.	At a football match there were twice as many boys as girls. There were 125 girls. How many boys were there?		125
17.	How long is it between two twenty five and three o'clock?	minutes	
18.	Put a ring round the smallest number on your answer sheet.	0.3          3.30          3.00 33          3.03          3.3	
19.	Double 66 and then add 50		66    50
20.	Multiply thirty by forty.		30    40

Pupil answer sheet

Name.....

Practice question		Total marks	
p			
Time: 5 seconds			
1		1.	12 £ £10 £6.40
2	32 40	2.	13 2ml 2 litres 2 000ml 200ml 20 litres
3		3.	14
4		4.	
5	degrees	5.	15
Time: 10 seconds			
6		6.	16 125
7	p 19p 16p	7.	17 minutes
8		8.	18 0.3 3.30 3.00 33 3.03 3.3
9	minutes	9.	19 66 50
10	20 - n = 14	10.	20 30 40
11	m	11.	

### Answers

<b>1.</b> 90	<b>12.</b> £3.60
<b>2.</b> 72	<b>13.</b> 200 ml
<b>3.</b> 20 016	<b>14.</b> 1.9
<b>4.</b> $\frac{2}{3}$ or two thirds or 66%	<b>15.</b> 3 or 3.0
<b>5.</b> $50^0$	<b>16.</b> 250
<b>6.</b> 11	<b>17.</b> 35 minutes
<b>7.</b> 35p	<b>18.</b> 0.3
<b>8.</b> 48 or 58	<b>19.</b> 182
<b>9.</b> 210 minutes	<b>20.</b> 1 200
<b>10.</b> 6	
<b>11.</b> 4 metres	

From these questions it can be seen that children are expected to be able to operate quickly, in their heads, including the following:

- |  |                                   |
|--|-----------------------------------|
| a. doubling and halving tens and units | g. understand simple equations    |
| b. change from £5 or £10               | h. convert cm to metres           |
| c. understand more than, less than     | i. halve simple decimals          |
| d. work out probabilities as fractions | j. approximate volume             |
| e. know angle properties of triangles  | k. multiply by whole tens         |
| f. know minutes and hours              | l. write large numbers in figures |