ANNUAL NATIONAL ASSESSMENT 2013
GRADE 6 MATHEMATICS TEST

MARKS: 75
TIME: 1½ hours

PROVINCE ___________________________________________________________

REGION ___________________________________________________________

DISTRICT __________________________________________________________

SCHOOL NAME ______________________________________________________

EMIS NUMBER (9 digits) ______________________________

CLASS (e.g. 6A) ____________________________________________________

SURNAME __________________________________________________________

NAME _____________________________________________________________

GENDER (✓) BOY ___________ GIRL ___________

DATE OF BIRTH ________ ________ ________ ________

This test consists of 14 pages, excluding the cover page.
Instructions to the learner

1. Read all the instructions carefully.
2. Question 1 consists of 10 multiple-choice questions. Circle the letter of the correct answer.
3. Answer questions 2 to 30 in the spaces or frames provided.
4. All working must be done on the question paper and not on rough paper.
5. The test counts 75 marks.
6. The test duration is 1½ hours.
7. The teacher will lead you through the practice exercise before you start the test.
8. You may not use a calculator.

Practice exercise

Circle the letter of the correct answer.

\[ 8 \times 6 = \]

A  48
B  84
C  72
D  60

You have answered correctly if you have circled A above.

NOTE:
- You will answer more questions like the one you have just completed.
- Do your best to answer each question even if you are not sure of the answer.
- Write down the answer that you think is the best and move to the next question.
- When you have answered all the questions on a page, move to the next page.
- Look only at your own work.

The test starts on the next page.
1. Circle the letter of the correct answer.

1.1 What is the next number in the number sequence?
   13 ; 17 ; 21 ; 25 ; ______
   A 28 
   B 29 
   C 30 
   D 46 
   (1)

1.2 Which number is missing in this number pattern?
   9,17 ; 9,15 ; 9,13 ; ______ ; 9,09
   A 9 
   B 9,10 
   C 9,11 
   D 9,12 
   (1)

1.3 What is the length of the pencil shown below?
   ![Pencil Image]
   The length of the pencil is …
   A 56 cm 
   B 5,6 mm 
   C 0,56 m 
   D 5,6 cm 
   (1)

1.4 22 + 35 = 63 – Δ, means that Δ = …
   A 6 
   B 28 
   C 41 
   D 57 
   (1)
1.5 What is the median of the data set below?
20 30 30 40 40 50 50

A 20
B 30
C 40
D 50

(1)

1.6 Round 347 659 off to the nearest 100 000.

A 300 000
B 348 000
C 350 000
D 400 000

(1)

1.7 Which one of the following numbers is a factor of 81?

A 7
B 8
C 18
D 27

(1)

1.8 What capacity does the arrow on the jug indicate?

A 310 ml
B 325 ml
C 320 ml
D 3,1 l

(1)
1.9 What fraction of the diagram is shaded?

A  \( \frac{1}{4} \)
B  \( \frac{3}{8} \)
C  \( \frac{1}{2} \)
D  \( \frac{5}{8} \)

1.10 Which 2-D shape below shows the left-hand view of the 3-D object?

A  

B  

C  

D  

Front view
2. Write the number symbol for the following number:
Three hundred and forty-two million, six hundred and fifty thousand,
seven hundred and ninety-eight.
____________________________

3. Write down the next prime number.
19 , 23 , 29 , ________

4. What is the value of the underlined digit in 45 678 921?
____________________

5. Calculate the answers for questions 5.1 to 5.7.

5.1  43 489 + 345 987 + 307

5.2  495 089 – 85 847

(1) (2)
5.3  $3097 \times 249$

5.4 Fill in the missing digits in the division sum.

\[
\begin{array}{c}
36 \overline{\div} 3924 \\
\underline{-} \\
324 \\
\underline{-} \\
0
\end{array}
\]

5.5 \(4\frac{1}{8} + 3\frac{3}{8}\)
5.6  20\% \text{ of } 400

5.7  7,83 + 5,39 - 4,86

6.  Complete: 0 \times (18 - 3) + (10 \div 2) - 2 = \underline{} \quad (1)

7.  Complete: 2 \times (4 + 5) = (2 \times \underline{\quad}) + (2 \times 5) \quad (1)

8.  Suzan buys a school bag for R65,81 and a pencil case for R18,23. How much change should she get if she pays with a R100 banknote?

(2)
9. Complete: If $787 - 614 = 173$, then $173 + _____ = 787$  

10. Will I count the number 104 if I count in multiples of 16 up to 160?  
    Answer YES or NO.  ____________  

11. During a school trip 785 learners were transported in buses. How many buses were used to transport all the learners if each bus could transport a maximum of 65 learners?  

12. Complete the table:  

<table>
<thead>
<tr>
<th>PERCENTAGE</th>
<th>DECIMAL FRACTION</th>
<th>COMMON FRACTION IN SIMPLEST FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>0,75</td>
<td>$\frac{1}{5}$</td>
</tr>
<tr>
<td>5%</td>
<td>0,05</td>
<td>$\frac{3}{4}$</td>
</tr>
</tbody>
</table>

13. Write down the following decimal numbers from the smallest to the biggest:  
    4,24 ; 42,4 ; 0,42  
    _______ _______ _______
14. Complete the table:

<table>
<thead>
<tr>
<th>x</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

(1)

15. Replace A with a number and B with a rule in the flow diagram below.

(2)

16. How many squares are there in the diagram below?

(2)

17. obtuse angle; acute angle; right angle

Use the above words to say what kind of angles are marked in the picture.

(2)
18. Carefully look at the stacks of cans and then complete the table.

Stack number: 1 2 3 4

<table>
<thead>
<tr>
<th>Stack number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cans</td>
<td>1</td>
<td>4</td>
<td>9</td>
<td>16</td>
<td>64</td>
</tr>
</tbody>
</table>

19. Complete the table:

<table>
<thead>
<tr>
<th>Name of 3-D object</th>
<th>Cube</th>
<th>Triangular pyramid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of vertices</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Number of edges</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Number of faces</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

20. Draw the line(s) of symmetry in the picture.
21. Draw a reduction of the rectangle on the grid so that the size of the new rectangle is a quarter of the size of the original one.

22. Examine the map below and answer the questions that follow.

22.1 What is the time difference in hours between Cape Town and Rio de Janeiro? _________________

22.2 If it is 11:00 a.m. in Rio de Janeiro, what is the time in Cape Town? _________________

23. Convert to the units as indicated:

23.1 \(3 \, \text{k}\ell = \underline{\text{ }} \, \ell\)  

23.2 \(43.5 \, \text{cm} = \underline{\text{ }} \, \text{m}\)
24. Examine the packets of sugar and their prices. Which is the best buy?

[Images of sugar packets with prices]

25. What is the difference in the temperatures indicated on the two thermometers? _____________

[Images of two thermometers]

26. The grid below shows the sketch of a rectangular garden which must be fenced. The squares on the grid are each 1,5 m long. What is the length of the fence around the garden?

[Grid diagram]
27. Examine the double bar graph below and then answer the questions.

**BOYS' AND GIRLS' EXTRAMURAL ACTIVITIES**

27.1 On which activity do the boys spend most of their time?
_________________________________________________ (1)

27.2 How much more time do girls spend on Art than boys?
_________________________________________________ (1)

28. What is the mode of the given set of numbers?

21 22 22 23 23 24 25 25 25

_________ (1)
29. Choose a word from the list to match the shape.

rectangle; parallelogram; pentagon; hexagon

rectangle: 

parallelogram: 

pentagon: 

hexagon: 

30. Examine the pictograph below and then answer the questions that follow.

<table>
<thead>
<tr>
<th>NUMBER OF RAINY DAYS DURING JUNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Town</td>
</tr>
<tr>
<td>Richards Bay</td>
</tr>
<tr>
<td>Port Elizabeth</td>
</tr>
<tr>
<td>Durban</td>
</tr>
<tr>
<td>East London</td>
</tr>
<tr>
<td>Knysna</td>
</tr>
</tbody>
</table>

Key:  represents 4 rainy days

30.1 How many rainy days did Cape Town have? 

30.2 Draw pictures on the pictograph to represent 12 rainy days for Knysna.

TOTAL: 75