END OF PRIMARY BENCHMARK

2019

MATHEMATICS

WRITTEN PAPER

Second Session

80 marks

1 hour 30 minutes
1. **Work out.**

   a) $175 + 25 = \underline{\hspace{2cm}}$

   b) $400 - 149 = \underline{\hspace{2cm}}$

   c) $24 \times 18 = \underline{\hspace{2cm}}$

   d) $714 \div 7 = \underline{\hspace{2cm}}$

   (4 marks)

2. **Match the calculations which are equal** to each other.

   a) $30 \times 30$  
     - $12 \times 2$

   b) $\frac{1}{4}$ of 200  
     - $9 \times 100$

   c) $8 \times 3$  
     - double 25

   d) $6 \times 100$  
     - $60 \times 10$

   (4 marks)
3a) A **regular hexagon** has _______ lines of symmetry.

b) Look at this regular hexagon.

![Hexagon Image]

i) of the hexagon is **shaded**.

ii) **Tick (✓)** the correct answer.

The six triangles that make up the hexagon are:

- isosceles triangles
- equilateral triangles
- scalene triangles
- right-angled triangles

(4 marks)
4. Write the **next number** in each sequence.

a) 4, 8, 12, 16, 20,  

b) 72, 64, 56, 48, 40,  

c) 1, 4, 9, 16, 25,  

d) 1, 3, 6, 10, 15,  

(4 marks)

5. **Tick (√) True or False.**

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) An <strong>equilateral triangle</strong> can have a right angle.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) An <strong>acute angle</strong> is smaller than 90°.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) There are 225° in <strong>2 \frac{1}{2} right angles</strong>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) There can be <strong>two obtuse angles</strong> in a triangle.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(5 marks)
6a) The diagram below shows the **scale** of a **weighing machine**.

![Scale diagram]

i) The arrow on the scale shows ____ grams.

ii) Draw an arrow on the scale to show 0.9 kg.

b) 1 bag of apples weighs 1.35 kg.

i) Work out the **mass** (weight) of 3 bags of apples. Give your answer in kg.

Show your working here.

kg

ii) How many such bags of apples have a **total mass** of 8.1 kg?

Show your working here.

bags

(5 marks)
7. Janet buys a **handbag** and a **skirt** during a **SALE** period.
   The **original price** of the handbag is **€68**.
   The **original price** of the skirt is **€50**.

   ![Handbag Sale](image1.png)

   ![Skirt Sale](image2.png)

   **a)** How much does Janet **spend** in all?

   ![Show your working here.](image3.png)

   \[ \text{€} \]

   **b)** How much money does Janet **save**?

   ![Show your working here.](image4.png)

   \[ \text{€} \]

   (5 marks)
8. This bar graph shows the number of people who went to the cinema during a particular week.

![Bar Graph]

**People who went to the Cinema in One Week**

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>People who went to the cinema in One Week</td>
<td>50</td>
<td>200</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>200</td>
<td>220</td>
</tr>
</tbody>
</table>

a) How many people went to the cinema on Tuesday? ____________ people

b) The number of people who went to the cinema on ______________ is double that of ______________.

c) \(\frac{2}{5}\) of the people who went to the cinema on Saturday were children. 30 of these children were girls. The rest were boys. **Use your working** to show that there were more boys than girls at the cinema on Saturday.

Show your working here.  

(5 marks)
9. Look carefully at this Map of a Town.

<table>
<thead>
<tr>
<th>fire station</th>
<th>toyshop</th>
<th>grocer</th>
<th>beach</th>
</tr>
</thead>
<tbody>
<tr>
<td>vet</td>
<td>pool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>police station</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>airport</td>
<td>bus stop</td>
<td>gym</td>
<td>florist</td>
</tr>
</tbody>
</table>

a) The **grocer** is ______________ of the **beach**.
   
The **beach** is **North East** of the ______________.

b) Johann and Lara are at the **gym** facing North.
   
   They move **2 squares North**.
   
   They are at the ______________.
   
   They are still facing North.
   
   Then they turn **135° clockwise** to go to the ______________.

c) Their father is at the bus stop.
   
   He is facing North.
   
   Then he turns __________ ° **anticlockwise** to go to the **police station**.

(5 marks)
10a) Kaya and Liam are decorating gift boxes with different ribbons. The rectangles below show parts of the ribbons that they have.

Which is Kaya and Liam’s longest ribbon?
Tick (✓) the correct answer.

- [ ] silver ribbon
- [ ] black ribbon
- [ ] white ribbon

b) Liam uses 1.5 metres of the silver ribbon to decorate a gift box.

\[
1.5 \text{ metres} = \quad \text{centimetres}
\]

c) Kaya needs to buy 14 metres of gold ribbon for another project. This ribbon costs €0.72 per metre. How much do 14 metres of this ribbon cost?

\[\text{Show your working here.}\]

\[\text{€}\]

(5 marks)
11a) Tick (√) the smallest capacity.

0.3 litres   \( \frac{3}{4} \) litres   340 millilitres   3 litres  

b) At school, children get a 200 ml carton of milk every Monday.

i) The teacher explains what milk is made up of.
   She says that 85% of the milk in the carton is water.
   How many millilitres of water are found in one carton of milk?

   Show your working here.

ii) Last Monday, students drank 18 litres of milk in all.
    How many cartons of milk were used?

   Show your working here.

(5 marks)
12a) Fill in the missing information about a rectangle and a square.

i) Length = 7 cm
   Area = 42 cm²
   Breadth = __________ cm

ii) Area = 81 cm²
      Perimeter = 36 cm
      Length = __________ cm
      Breadth = __________ cm

b) Work out the area of the shaded part in the shape below.

Show your working here.

(5 marks)
13. This picture shows dad, mum and their daughter Anna.

a) Dad is $1 \frac{3}{4}$ m tall.
   Mum is $1.64$ m tall.

Mum is __ cm shorter than dad.

b) Look at the picture again.
   Tick (✓) the best estimate for Anna’s height.

   (i) 0.90 m
   (ii) $1 \frac{1}{4}$ m
   (iii) 1.6 m
   (iv) 125 m

   c) Both Anna and her mum celebrate their birthday on the same day in April.
   Mum is 40 years old.
   Anna is now $\frac{1}{4}$ of her mum’s age.
   How old will Anna be when her mother is 44 years old?

Show your working here.

years old

(6 marks)
14. Look carefully at the table below.

<table>
<thead>
<tr>
<th>FILMS SHOWING TODAY...</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SING</td>
<td>1 hour 54 minutes long</td>
</tr>
<tr>
<td>Starting times</td>
<td>2:30 pm</td>
</tr>
<tr>
<td>BENJI</td>
<td>1 hour 27 minutes long</td>
</tr>
<tr>
<td>Starting times</td>
<td>2:20 pm</td>
</tr>
<tr>
<td>TARZAN</td>
<td>1 hour 35 minutes long</td>
</tr>
<tr>
<td>Starting times</td>
<td>1:30 pm</td>
</tr>
</tbody>
</table>

a) **SING** is **1 hour 54 minutes** long.

1 hour 54 minutes = _______________ minutes

b) What is the **difference** between the **shortest** and the **longest** film?

   minutes

c) Peter and his sister see the **3rd show of BENJI**.

   At what time does the film finish?

   :

d) Family Vella wants to see both **BENJI** and **TARZAN**.

   They plan to see the **1st show of BENJI** and the **2nd show of TARZAN**,
   both from the start and on the same day.

   Is this possible? **Tick (✓) the correct answer.**

   Yes [ ] No [ ]

   Show working to explain your answer.

   Show your working here.

(6 marks)
15a) The mean age of the 15 children in a Mini Athletics Club is 6 years. The mean age of the same 15 children and the coach is 8 years. How old is the coach?

Show your working here.

years old

b) The Mini Athletics Club sessions start at 15:45. Draw hands on the clock to show 15:45.

[Clock image]

c) Today is Wednesday 12th June 2019. The children at the Mini Athletics Club have a race on 6th July 2019. What day of the week is 6th July 2019?

(6 marks)
16a) This is a Number Pyramid.
Each rectangle is the sum of the two rectangles immediately below.
Fill in the blank rectangles.

b) In this Magic Square, the sum of the numbers of each row, column and diagonal is equal to 15.
Each number in this Magic Square is smaller than 10 and is used only once.
Fill in the blank squares.