END OF PRIMARY BENCHMARK
2017
SECOND SESSION
MATHEMATICS
WRITTEN PAPER

80 marks
1 hour 30 minutes
1. Work out.

\begin{align*}
a) & \quad 445 + 265 = \underline{\phantom{000}} \\
b) & \quad 1673 - 211 = \underline{\phantom{000}} \\
c) & \quad 16 \times 70 = \underline{\phantom{000}} \\
d) & \quad 3060 \div 15 = \underline{\phantom{000}}
\end{align*}

(4 marks)

2. I am a 5-digit number.

Follow the clues to guess what number I am and use all the digits 4, 6, 7, 8 and 9.

Clues:

- The digit 6 is in the Hundreds place.
- I am an odd number.
- The digit in the Units place is a square number.
- When I am rounded to the nearest thousand I become 79,000.

I am \underline{\phantom{000}} .

(4 marks)
3a) Circle the numbers which together make 438·5.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>8</td>
<td>(\frac{5}{10})</td>
</tr>
<tr>
<td>40</td>
<td>30</td>
<td>80</td>
<td>(\frac{5}{100})</td>
</tr>
<tr>
<td>400</td>
<td>300</td>
<td>800</td>
<td>(\frac{5}{1000})</td>
</tr>
</tbody>
</table>

b) Use all these number cards to write a 6-digit number.

Give your answer in figures.

(4 marks)

3b) Circle the odd one out.

i) 1.6 \(
\begin{array}{c}
\frac{6}{10}
\end{array}\)
1.60 \(1 \frac{6}{100}\)

ii) 38 \(\frac{1}{4}\)
38.14
38.25
38 \(\frac{25}{100}\)

(4 marks)
4. Kris saves some of his money in a money box.
   In this money box, he has 7 coins which total €2.60.
   a) List 7 coins that add up to €2.60.
      _____, _____, _____, _____, _____, _____, _____
   b) Grandpa gives Kris double the money he has saved so far.
      How much money does grandpa give Kris?
      [Show your working here.]
      €
   c) How much money does Kris have now?
      [Show your working here.]
      €
   d) Kris wants to buy a book that costs €10.
      Kris needs to save € more to buy the book.
      [Show your working here.]
      (4 marks)
5. Look at these shapes.

Circle the correct answers in the brackets.

a) Shape A has (3, 4, 5) angles.
   These angles are all (right, obtuse, acute) angles.

b) The angles in Shape A together add up to (90°, 180°, 360°).

c) Shape (B, C, D) has no angles.

d) Shape (B, C, D) has one right angle and two acute angles.

(5 marks)
6. Look carefully at the map of a country.

A, B, C, D, E and F are cities.

a) Fill in with directions.
   i) City F is ___________ of City D.
   ii) City C is ___________ of City D.
   iii) City F is ___________ of City A.

b) Fill in with A, B, C, D, E or F.

City ______ is West of City ______.

(5 marks)

7. Fill in to make correct calculations.

a) \[ \square \times \square = \square \]
   \[
   \square \times \square = 81
   \]

b) \[ \square \times \square = \square \]
   \[
   \square \times \square = 100
   \]

c) \[ \square \times 7 = \square \]
   \[
   \square \times 7 = 68
   \]

(5 marks)
8. The rectangle below represents the floor in Emma’s bedroom.

\[
\text{length} \\
4.5 \text{ m} \\
\text{Emma’s Bedroom} \\
\text{breadth} \\
4 \text{ m}
\]

a) Work out the **perimeter** of the floor in Emma’s bedroom.

Show your working here.

b) Work out the **area** of this floor.

Show your working here.

\[
\text{m}^2
\]

c) There is a carpet in Emma’s bedroom.

The **area** of the carpet is **12 m}^2\).

Work out the **length** and the **breadth** of the carpet.

\[
\text{Length} \quad \text{m} \\
\text{Breadth} \quad \text{m}
\]

(5 marks)

a) \[48\% = \frac{48}{\phantom{0}} = 0 \cdot \phantom{0} \phantom{0} \phantom{0} \phantom{0}\]

b) Here is a rectangle with 5 identical squares shaded inside it.

i) What fraction of the rectangle is shaded? 
   Give your answer in its simplest form.

ii) Shade more squares to have 60\% of the rectangle shaded.

(5 marks)
10. Below is the **mass** (weight) of **four animals** on Bertu’s Farm.

<table>
<thead>
<tr>
<th>Animal</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>cat</td>
<td>3.27 kg</td>
</tr>
<tr>
<td>sheep</td>
<td>55.5 kg</td>
</tr>
<tr>
<td>cow</td>
<td>403 kg</td>
</tr>
<tr>
<td>rabbit</td>
<td>2050 g</td>
</tr>
</tbody>
</table>

a) The **cat** is the **lightest animal**.

b) Work out the **total mass** of these **four animals**. Give your answer in **kg**.

```
Show your working here.
```

```
kg
```

(c) Work out the **difference** in **mass** between the **sheep** and the **cow**. Give your answer in **kg**.

```
Show your working here.
```

```
kg
```

(5 marks)
11. Buses leave the bus station **every 20 minutes**.
   The **first** bus leaves at **06:05**.

   a) **Draw the hands to show 06:05** on the clock.

   b) **At what time does the second bus leave?**
   Give your answer in digital **24-hour time**.

   Show your working here.

   c) **Maria is at the station at 07:30.**
   Can she catch the **fifth** bus?

   **Tick (✓) the correct answer.**
   Yes [ ] No [ ]

   **Explain** by showing your working.

   Show your working here.

   (5 marks)
12. The bar graph below shows the number of books sold in one week at READING DEN bookshop.

![Bar Graph]

**Books Sold**

<table>
<thead>
<tr>
<th>Days of the Week</th>
<th>Books Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>50</td>
</tr>
<tr>
<td>Tuesday</td>
<td>30</td>
</tr>
<tr>
<td>Wednesday</td>
<td>45</td>
</tr>
<tr>
<td>Thursday</td>
<td>60</td>
</tr>
<tr>
<td>Friday</td>
<td>45</td>
</tr>
<tr>
<td>Saturday</td>
<td>50</td>
</tr>
<tr>
<td>Sunday</td>
<td>10</td>
</tr>
</tbody>
</table>

**Books sold in one week**

a) **10 books** were sold on Friday. **Complete** the bar graph.

b) **45 books** were sold on [ ] .

c) **Tick (✓) True or False.**

More than 300 books were sold during the week.

- True [ ]
- False [ ]

**Show working to explain your answer.**

(5 marks)
13. There are 36 stickers on 1 sheet of stickers.

a) James has 14 sheets of stickers. How many stickers does James have?

b) Luke has 216 stickers. How many sheets of stickers does Luke have?

c) Magda has 2 sheets of stickers. She says she has less than a quarter of Luke’s stickers. Tick (✔) the correct answer. Is she right?

Yes ☐ No ☐

Explain by showing your working.
14a) There is some water in the jug below.

i) How much water is there in the jug?
   Give your answer in litres.

ii) Greg pours some more water in the jug.
   There are now $1 \frac{1}{5}$ litres of water in the jug.
   Draw an arrow on the jug to show the new level of water.

b) During Greg’s birthday party 45 litres of water are used.
   How many 1.5 litre jugs of water are used?

Show your working here.

(6 marks)
15. Karl makes a pattern using matchsticks.

![Matchstick patterns](image)

a) Work out the number of matchsticks Karl uses to make:

i) Figure 5

Show your working here.

matchsticks

ii) Figure 23

Show your working here.

matchsticks

b) Which Figure will have 46 matchsticks?

Show your working here.

Figure

(6 marks)
16. Martha, Paula and Joanne are friends.

a) The total mass (weight) of Martha, Paula and Joanne is 195 kg. Work out the mean (average) mass of the three friends.

Show your working here.

kg

b) The mean mass of Martha and Paula is 62.5 kg. The mean mass of Paula and Joanne is 67 kg. Work out Paula’s mass.

Show your working here.

kg

(6 marks)