Education Bureau
Territory-wide System Assessment 2008
Primary 6
Mathematics

Instructions:
1. Stick barcode labels on pages 1, 3, 5, 7 and 9 in the spaces provided.
2. There are 46 questions in this test. Answer all questions.
3. Time allowed is 50 minutes.
4. Write your answers in this Question-Answer Booklet.
5. Do not write in the margins.
6. Use of calculators is not allowed.
7. Do your rough work on the rough work sheet provided.
8. Write your School Code, Class and Class Number in the boxes below.

Instructions for answering questions:
(a) Multiple choice questions – Blacken the circle next to the correct answer with an HB pencil.
For example:

● A
○ B
○ C
○ D

(b) Questions in which you are asked to “Show your working” – Write your mathematical expressions/equations, answers and statements/conclusions in the spaces provided. There is NO need to show your rough work.

(c) Other types of questions – Answer as required in the spaces provided.

School Code
學校編號

Class
班別

Class No.
班號

Write one capital letter in this box
此格只許填寫一個大寫英文字母
1. In the number 730.582,
   (a) the digit ‘8’ is in the _______ place;
   (b) the digit ‘0’ is in the _______ place.

2. Which of the following numbers is a multiple of 27?
   - A. 1
   - B. 3
   - C. 9
   - D. 27

3. List all the factors of 52.
   Answer: ____________________________

4. The first common multiple of 6 and 15 is 30.
   The fifth common multiple is ________.

5. The Highest Common Factor (H.C.F.) of 28 and 70
   is ________.

6. Fill in each of the following boxes with the correct number.

   \[
   \frac{\square}{3} = \frac{40}{\square} = 5
   \]
7. Express the shaded part as a fraction of the whole figure below.

Answer: The shaded part is \[ \boxed{\quad} \] of the whole figure.

8. (a) Change \( \frac{5}{6} \) into an improper fraction.

Answer: \[ \boxed{\quad} \]

(b) Change \( \frac{40}{7} \) into a mixed number.

Answer: \[ \boxed{\quad} \]
9. Mrs Wong has two sons, John and Peter. She gives \( \frac{2}{5} \) of her savings to John and \( \frac{3}{7} \) of it to Peter. The rest of it will be donated to charity.

(a) Who will have more money?
Answer: *John / Peter (* circle the answer)

(b) What fraction of Mrs Wong’s savings will be donated to charity?
Answer: 

10. The above diagram shows four large squares. If each large square represents 1, use a decimal to show the shaded part of the above diagram.
Answer: ________________

11. Change 3.64 into a fraction and reduce it to the simplest form.
Answer: 

12. \[ 432 - 312 \div 24 = \]
   - A. 5
   - B. 13
   - C. 120
   - D. 419

13. \[ 13 \times (118 + 29) = \] _______

14. \[ \frac{2}{7} + \frac{3}{7} - \frac{4}{7} = \] _______

15. \[ \frac{6}{7} \times \frac{2}{3} \times \frac{1}{5} = \] _______

16. A bag of nuts weighs \(1\frac{1}{3}\) kg.

   The total weight of \(5\frac{1}{2}\) bags of nuts is _______ kg.
17. Three children buy gifts for their parents. They buy a tie which costs $112 and a pair of earrings which costs $203. How much does each child pay on average?

Answer: Each child pays $ _________ on average.

18. Mr Chan buys a hi-fi set by monthly instalments. The payment can be fully settled in one year if he pays $350 each month. How much should he pay each month if he wants to settle the payment in ten months?

(Show your working)

19. The remaining value on Mary’s stored value card was $24.30. She spent $3.40 on bus fare and then added $50 to the card. What is the new remaining value on her stored value card now?

Answer: The new remaining value is $ _________.

20. A chocolate bar costs $5.80. Sam has 40 dollars. How many chocolate bars can he buy at most?

Answer: He can buy _________ chocolate bars at most.
21. Which of the following expressions is most suitable for estimating the value of $6.9 \times 1\frac{15}{16} - 4.1$?

- A. $6 \times 1 - 4$
- B. $6 \times 2 - 4$
- C. $7 \times 1 - 4$
- D. $7 \times 2 - 4$

22. Use a pencil to shade the small squares in the diagram on the right so that the shaded part is 12% of the whole.

23. (a) Change $\frac{7}{8}$ into a percentage.

Answer: _____ %

(b) Change 124% into a fraction and reduce it to the simplest form.

Answer:

24. A double-deck bus has 40 seats and 27 standees on the lower deck, and 68 seats on the upper deck.

The number of standees is ________% of the total number of passengers that the double-deck bus can carry.
25. 

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

(a) Fanny has joined a 4-day camp. If the camp ends on the 15\textsuperscript{th} of August, it starts on the ________ of ________.  
(month)

(b) Fanny has enrolled in a chess class which lasts for 12 days. The class starts on the third Tuesday of August, it ends on the ________ of ________.  
(month)

(c) Fanny is a choir member. The first practice session will be held on the 7\textsuperscript{th} of September. That day is ________.  
(day of the week)

26. The perimeter of a rectangular flowerbed is 40 m. Its width is 8 m. What is its length?

Answer: Its length is _______ m.
27. A rectangular piece of paper is 4 cm long and 3 cm wide. It is cut into two parts P and Q as shown below.

Which of the following statements is correct?
- O A. The perimeters of P and Q are equal.
- O B. The perimeter of P is longer than that of Q.
- O C. The perimeter of Q is longer than that of P.
- O D. The perimeters of P and Q cannot be compared.

28. Which of the following tools is most suitable for measuring the results in a long jump competition?
- O A. Trundle wheel
- O B. Metre rule
- O C. Stride length
- O D. Tape measure
29. Which of the following tools is most suitable for measuring the weight of a carton of 250 mL juice?

- A. A kitchen scale
- B. A beaker
- C. A bathroom scale
- D. A weight scale

30. In the diagram on the right, O is the centre of the circle. What is the circumference? (take $\pi$ as 3.14)

Answer: The circumference is _________ cm.

31. The area of the triangle below is _________ cm$^2$.
32. In the diagram below, the side of each small square is 1 cm. The area of the shaded part is \(\ldots\). (give the answer with a unit)

![Diagram of shaded area]

33. The three solids shown above are made up of \(\ldots\), and the volume of each \(\ldots\) is 6 cm\(^3\).

Solid *A / B / C (*circle the answer) has the largest volume. Its volume is \(\ldots\) cm\(^3\).
34. Mr Chan shoots an arrow at a target 30 m away. The arrow hits the target in 0.5 s. Find the average speed of the arrow.
   Answer: The average speed of the arrow is __________. (give the answer with a unit)

35. Which of the following units is most suitable for measuring the speed of an MTR train?
   - A. m/s
   - B. s/m
   - C. km/h
   - D. h/km

36. Arrange the three beakers below according to the amount of water, from the smallest to the largest. Write the letters for the answer.

   ![Beakers](image)
   Answer: _________, _________, _________
   (Smallest) _________, _________ (Largest)

37. There are 6 machines in a factory. Each machine produces M bulbs daily. To increase production, each machine will produce 50 more bulbs daily. How many bulbs will the factory produce daily?
   - A. \( M + 50 \)
   - B. \((M + 50) \times 6\)
   - C. \( M \times 6 + 50 \)
   - D. \( M + 50 \times 6 \)
38.  \[ 12 = \frac{x}{6} \]

\[ x = \]

39. A number is divided by 7 and then 14 is added. The sum equals 28. Find the number by the **method of solving equation**.

(Show your working)

40. How many edges does a cube have?

- O A. 4
- O B. 8
- O C. 12
- O D. 16
41. In the diagram below, O is the centre of the circle. The straight lines PR and QS intersect at M.

(a) Which of the following straight lines is a diameter?

- A. QS
- B. PR
- C. OP
- D. MS

(b) Read the following statements. If the statement is correct, put a ‘✓’ in the box. If the statement is wrong, put a ‘✗’ in the box.

Answer

(1) QM is a radius of the circle.  

(2) The length of PR is twice that of OQ.
42. Study the following 2-D shapes. Write the letter(s) for the answer.

(a) Rhombus:  
(b) Hexagon:  
(c) Equilateral triangle:  
(a) The __________ is to the south-east of the Sports Ground.

(b) Jeffrey goes north-east from the Cinema to the __________

(c) Mary goes __________ from the School and (direction) reaches the Cinema, and then turns __________ (direction) to reach the Sports Ground.
44. The following pictogram shows the sales of buns at a bakery last week.

Sales of Buns at a Bakery Last Week

Each 🍞 represents 100 buns

<table>
<thead>
<tr>
<th></th>
<th>Fruit bun</th>
<th>Cream bun</th>
<th>Sausage bun</th>
<th>Wheat bun</th>
<th>Ham bun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>🍞</td>
<td>🍞</td>
<td>🍞</td>
<td>🍞</td>
<td>🍞</td>
</tr>
</tbody>
</table>

(a) The most popular bun sold last week was the ________ bun.
The number of buns sold was ________.

(b) The total number of buns sold last week was ________.

(c) Which type of buns had sales 20% of the total sales of all the buns?

Answer: The ________ bun had sales 20% of the total sales of all the buns.
45. The following bar chart shows the use of plastic forks at Delicious Fastfood Shop in the first half of this year.

The Use of Plastic Forks at Delicious Fastfood Shop in the First Half of This Year

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of plastic forks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>30,000</td>
</tr>
<tr>
<td>Feb</td>
<td>20,000</td>
</tr>
<tr>
<td>Mar</td>
<td>15,000</td>
</tr>
<tr>
<td>Apr</td>
<td>10,000</td>
</tr>
<tr>
<td>May</td>
<td>10,000</td>
</tr>
<tr>
<td>June</td>
<td>5,000</td>
</tr>
</tbody>
</table>

(a) The month with the highest number of plastic forks used was ___________ , and the number was ___________.

(b) The total number of plastic forks used in the first half of the year was ___________.

(c) The number of plastic forks used in the first three months was ___________ % of the total used in the first half of the year.
46. The following is the budget of Mr Lee’s expenses for next week. What is his average expenditure each day?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon - Fri</td>
<td>$80 each day</td>
</tr>
<tr>
<td>Sat</td>
<td>$120</td>
</tr>
<tr>
<td>Sun</td>
<td>$180</td>
</tr>
</tbody>
</table>

(Show your working)