Education and Manpower Bureau
Territory-wide System Assessment 2006
Primary 6
Mathematics

Instructions:
1. There are 42 questions in this test.
2. Answer all questions.
3. The time allowed is 50 minutes.
4. Use of calculators is not allowed.
5. Write your answers in this question booklet.
   (a) Multiple choice questions:
   Mark your answers by putting a "✓" in the "○", e.g.:
   \[
   2 + 3 = \\
   ○ A. 4  ○ B. 5  ○ C. 6  ○ D. 7
   \]
   (b) Questions in which you are asked to “Show your working”:
   Write your mathematical expressions/equations, answers and statements/conclusions in the space provided. There is NO need to show your rough work.
   (c) Other types of questions:
   Answer as required in the space provided.
6. Do your rough work on the rough work sheet provided.
7. Write your School Code, Class and Class Number in the spaces below.

<table>
<thead>
<tr>
<th>School Code</th>
<th>Class</th>
<th>Class No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Write one capital letter in this box.

2006-TSA-MATH-6ME4-1
1. $68 \times 35 = \underline{\hspace{2cm}}$

2. $748 \div (444 - 376) = \underline{\hspace{2cm}}$

3. Arrange the following fractions in descending order.

\[
\frac{1}{4} \quad \frac{5}{6} \quad \frac{3}{5}
\]

Answer: [ ] , [ ] , [ ]
(largest) (smallest)

4. $2\frac{3}{7} - \frac{5}{7} = \underline{\hspace{2cm}}$

5. $1\frac{3}{10} \div \frac{2}{5} = \underline{\hspace{2cm}}$

6. $120 \div 2.4 = \underline{\hspace{2cm}}$

7. $0.86 \div 0.4 - 0.2 = \underline{\hspace{2cm}}$

8. 14 is a common multiple of

- A. 2, 7
- B. 4, 7
- C. 28, 42
- D. 36, 42
9. The highest common factor (H.C.F.) of 18 and 45 is _______.

10. Which of the following expressions is most suitable to estimate the value of $15\frac{8}{9} \times \frac{1}{12}$?

   ○ A. $16 \times 1$
   ○ B. $16 \times 0.1$
   ○ C. $15 \times 0.2$
   ○ D. $15 \times 1$

11. The charge for international phone calls by a telephone company is shown below:

   Long Distance Calls To the U.S.A. – Mobile at $5 per 8 minutes

Mr. Chan called his friend in the U.S.A. They talked for 40 minutes on their mobiles. How much did he have to pay?
(Show your working)
12. (a) Change \( \frac{13}{25} \) into a percentage.

Answer: \( \underline{\hphantom{0}} \) \%

(b) Change 136 \% into a fraction and reduce it to its simplest form.

Answer: \( \underline{\hphantom{0}} \)

13. A bottle of milk costs 7 dollars and 30 cents. A bottle of fruit juice is 1 dollar and 70 cents cheaper. John wants to buy a bottle of each. Therefore, John needs to pay a total of $ \underline{\hphantom{0}} \).

14. In the figure on the right, the weight of the carrot is \underline{\hphantom{0}} kg.

15. Mandy wants to buy a cup of fruit juice and a dish of noodles, but she has only $40. Which kind of noodles can she buy? How much change is left?

Answer: She can buy \underline{\hphantom{0}} noodles and she will have $ \underline{\hphantom{0}} left.
16. The table below shows the fare for a city taxi.

<table>
<thead>
<tr>
<th>Kilometres</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 2 km</td>
<td>$15.00</td>
</tr>
<tr>
<td>Every 0.2 km thereafter</td>
<td>$1.40</td>
</tr>
</tbody>
</table>

Sarah went to grandmother’s home by taxi and the total distance of the journey was 7.6 km.

(a) How many kilometres of the journey were charged at $1.40 per 0.2 km?
Answer: _______ km

(b) What was the taxi fare for the whole journey?
Answer: The taxi fare was $_______.

17. The volume of the cuboid shown on the right is _______ cm³.

18. **Luggage Weight Limit on Train**

   Each passenger is allowed to carry luggage not exceeding 30 kg in total weight.

My mother boarded the train with 2 pieces of luggage, weighing $19\frac{1}{8}$ kg and $12\frac{3}{8}$ kg respectively.

(a) The total weight of my mother’s luggage was _______ kg.

(b) My mother’s luggage exceeded the weight limit by _______ kg.
19. During the summer sale of a department store, a stamp was given with every purchase of $40 (receipts could be added up for exchanging stamps). Mary bought a set of cutlery for $399.90 and a weighing scale for $90.80. How many stamps did she get altogether? (Show your working)

20.

<table>
<thead>
<tr>
<th>Shop A</th>
<th>Shop B</th>
</tr>
</thead>
<tbody>
<tr>
<td>$380.00</td>
<td>$450.00</td>
</tr>
</tbody>
</table>

(a) What is the discount percentage for the oven sold in Shop B?
Answer: It is sold at a discount of _______ %.

(b) During the annual sale in Shop A, all items are sold at a discount of 25%. What is the discounted selling price of the oven in Shop A?
Answer: The discounted selling price is $ _______.

(c) Which shop sells the oven at a lower price? By how much is the selling price cheaper?
Answer: Shop____ sells the oven at a lower price, and it is $ _______ cheaper.
21. Which of the following figures have $\frac{1}{3}$ shaded?

![Images of figures A, B, C, D, E]

Answer: ____________

22. The original price of a phonics machine is 670 dollars and 50 cents. In a sale, the price is reduced by 50 dollars.

(a) Write the reduced price on the price tag.

![Price tag with reduced price blank]

(b) Peter is taking Putonghua lessons and his mother bought him a phonics machine at the reduced price. How much did she pay? Circle the money for your answer.

![Images of money]

Go on to the next page
23. (a) Good Supermarket

Frying Pan
$120.00

Good Supermarket

$18 Cash Coupon

For any purchase of $100 or more, customers can save $18 with a cash coupon. This coupon cannot be used together with other promotional offers.

If a cash coupon is used to buy the frying pan, then it can be bought at a discount of ________%.

(b) The Good Supermarket now offers a 10% special discount on all items. My mother wants to buy the frying pan and she has a cash coupon. Which method (cash coupon/special discount) should she use to buy the frying pan? Why?

Answer: * Cash coupon / Special discount (*circle the correct answer), because


1 mark (44)

1 mark (45)

24. Fill in each of the blanks below with a suitable unit of measurement.

(a) A pair of chopsticks is about 19 _______ long.

(b) A toothbrush weighs about 100 _______.

(c) The distance between Tai Po in the New Territories and Wanchai on Hong Kong Island is about 30 _______.

(d) The petrol tank of a small car can hold about 40 _______ of petrol.
25. In the figure on the left, the perimeter of the shaded part is ______ cm.

26. The area of the trapezium shown above is ______ cm².

27. The volume of the 3-D solid on the right is ______ m³.

28. There was a robbery and a policeman chased the robber. The policeman ran for 3 minutes before catching the robber. If the policeman ran at an average speed of 4 m/s, then he had run ______ metres altogether.
29. The rectangular piece of paper shown on the right is 90 cm long and 30 cm wide. At most how many pieces of square paper of area 25 cm$^2$ can be cut from it? (Show your working)

30. (a) The water tank shown above on the left holds water up to 16 cm deep. The amount of water in the tank is _______ litres.

(b) A 3-D solid is put into the water tank, the water level in the tank rises up by 4 cm (see the figure shown above on the right). The volume of the 3-D solid is _______ cm$^3$. 
31. Which of the following groups of numbers has an average of 14?

- A. 11, 12, 13, 14, 15
- B. 10, 12, 14, 16, 18
- C. 9, 11, 13, 15
- D. 8, 10, 12, 14, 16

32. The price of a mobile phone is \( y \) and that of a digital camera is $100 less than twice the price of the mobile phone. What is the price of the digital camera?

Answer: The price is $ ________________.

33. | July |
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>25</td>
</tr>
</tbody>
</table>

(a) Paul's final examination lasted for 5 days and ended on the 2\(^{nd}\) of July. His final examination began on the _____ of _____________.

(month)

(b) Starting on the fifth Friday of July, Paul joined a 6-day football training camp. The training camp ended on the _____ of _____________.

(month)

(c) If February of this year has 29 days, the total number of days in the year is ________.
34. (a) O is the centre of the circle shown on the right. Draw a diameter on the circle.
(b) Measure the length of this diameter with a ruler. It is _______ cm long.
(c) The circumference of this circle is about _______ cm (answer with a whole number), because _____________________________.

35. Study the following 3-D shapes. Write the letter(s) for the answer.

(a) Pyramid(s): ____________________________
(b) Prism(s): ____________________________
(c) Sphere(s): ____________________________
36. (a) The six 2-D shapes below are the faces of a 3-D solid, which is a ________________________.

(b) The three 2-D shapes below are the faces of a 3-D solid, which is a ________________________.

37. (a) From the five points in Figure 1, choose two points and join them to form a straight line so that it is parallel to the given line PQ.

(b) From the five points in Figure 2, choose two points and join them to form a straight line so that it is perpendicular to the given line PQ.
38. In a school, Primary 3 to Primary 6 classes are collecting waste paper for recycling. The table below shows the weight of waste paper collected from each class level.

<table>
<thead>
<tr>
<th>Primary</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight of Waste Paper (kg)</td>
<td>42</td>
<td>55</td>
<td>48</td>
<td>61</td>
</tr>
<tr>
<td>Rounded to the nearest tens</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Round off the data to the nearest tens and complete the table above.

(b) Use the rounded data to construct a pictogram, using one 🗿 to represent 10 kg of waste paper.

**The Weight of Waste Paper Collected from Primary 3 to Primary 6**

1 🗿 represents 10 kg
39. The Sing Sing Noodles Shop has 5 branches all over Hong Kong. The following bar chart shows the sales at each branch in July.

\[ \text{The Sales at Each Branch in July} \]

<table>
<thead>
<tr>
<th>Branch</th>
<th>Sales (ten thousand dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mongkok</td>
<td>15</td>
</tr>
<tr>
<td>Central</td>
<td>25</td>
</tr>
<tr>
<td>Causeway Bay</td>
<td>20</td>
</tr>
<tr>
<td>Tsuen Wan</td>
<td>15</td>
</tr>
<tr>
<td>Yuen Long</td>
<td>10</td>
</tr>
</tbody>
</table>

(a) The district with the greatest sales is ________,
and the amount of sales is ________ dollars.

(b) The total sales at the 5 branches in July is ________ dollars.

(c) In July, the total expenditure of these 5 branches is 500 000 dollars, which is _____ % of the total sales at all the branches.

40. Solve the equation:

\[ \frac{3}{4}H - 7 = 26 \]

\[ H = \]
41. Which of the following are equations? Write the letters for the answer.

A. \(1.25 = \frac{y}{5}\)
B. \(4 \times 4 = 16 \div 1\)
C. \(9 \times 0 = 0\)
D. \(33 - m = 19\)
E. \(33 - m\)

Answer: ____________________________

42. Originally there was \(A\) mL of whipping cream in the bottle. My mother used 400 mL of the cream to make a birthday cake and 300 mL was still left in the bottle.

(a) Which of the equations below can be used to find the original amount of whipping cream?

- \(\bigcirc\) A. \(A + 300 = 400\)
- \(\bigcirc\) B. \(A - 400 = 300\)
- \(\bigcirc\) C. \(400 - A = 300\)
- \(\bigcirc\) D. \(300 - A = 400\)

(b) The original amount of whipping cream was _______ mL.

— END OF PAPER —