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 “〇”, e.g.:
\[ 2 + 3 = \]
〇 A. 4  ✓ B. 5  〇 C. 6  〇 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.

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楷英文字母

2006-TSA-MATH-6ME2-1
1. When $326 \div 26$, the quotient is _______ and the remainder is _______.

2. $125 \times (12 - 8) = _______.$

3. Fill in each of the boxes below with the correct number.
   
   (a) $\frac{72}{72} = \frac{8}{12}$
   
   (b) $\frac{8}{12} = \underline{\hspace{2cm}}$

4. Which of the improper fractions below is equal to $7\frac{3}{5}$?

   ○ A. $\frac{22}{5}$  
   ○ B. $\frac{26}{5}$  
   ○ C. $\frac{35}{5}$  
   ○ D. $\frac{38}{5}$

5. $2\frac{1}{6} - 1\frac{3}{4} + \frac{2}{3} = \underline{\hspace{2cm}}$

6. $3 - \frac{8}{23} \times 1\frac{7}{16} = \underline{\hspace{2cm}}$

7. $25 \times 4.3 = \underline{\hspace{2cm}}$
8. \(18.9 \div 1.3 = \) ________ (Correct the answer to two places of decimal)

9. In 137.265, the digit ‘3’ is in the ______________ place, and the digit ‘2’ is in the ______________ place.

10. Find all the factors of 32.
   
   - A. 0, 1, 2, 4, 8, 16, 32
   - B. 0, 1, 2, 4, 8, 16
   - C. 1, 3, 6, 8, 16, 32
   - D. 1, 2, 4, 8, 16, 32

11. All the common multiples of 8 and 12 that are within 50 are ________________.

12. All the common factors of 24 and 40 are ________________.

13. Which of the following figures show 20% of the whole figure shaded? Write the letters for your answer.

   A  
   B  
   C  
   D  
   E

Answer: _______________
14. (a) Change $\frac{13}{25}$ into a percentage.

Answer: ________ %

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

Answer: 

15. 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 $ ________.

16. In the figure on the right, the weight of the carrot is ________ kg.

17. 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 ________ noodles and she will have $ ________ left.
18. 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 $ _______.

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

20. **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.
21. 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)

22. 

<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.
23. 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)

24.

The area of the 2-D shape above is \[ \text{\underline{\hspace{3cm}}} \text{ m}^2 \].

25. What is the capacity of the box shown on the right?

- [ ] A. 10 L
- [ ] B. 1 L
- [ ] C. 0.1 L
- [ ] D. 0.01 L
26. What is the amount of liquid in each of the beakers shown below? (Give your answer with a unit.)

(a) [Image of a beaker with 0.5 L marked]

The amount of liquid is

(b) [Image of a beaker with 2 L marked]

The amount of liquid is

(1 mark (48) 1 mark (49)

27. The timetable below shows part of the programme schedule of Globe TV on Monday.

<table>
<thead>
<tr>
<th>Time</th>
<th>Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 : 00</td>
<td>News and Weather</td>
</tr>
<tr>
<td>13 : 30</td>
<td>ETV</td>
</tr>
<tr>
<td>15 : 00</td>
<td>Wild Life</td>
</tr>
<tr>
<td>15 : 50</td>
<td>Cartoon</td>
</tr>
<tr>
<td>17 : 30</td>
<td>Soccer</td>
</tr>
</tbody>
</table>

(a) The time now is half past three in the afternoon. The programme showing on TV is

(1 mark (50)

(b) Draw the hour hand and minute hand on the clock face to show the time at which the Cartoon programme begins.

(1 mark (51)
28. In the figures below, which has the largest shaded part?

A. ○

B. ○

C. ○

D. ○

29. The following rectangle is formed by overlapping the two identical rectangles shown above. The darker part is the overlapping region of the two rectangles.

The larger rectangle so formed has
(a) a perimeter of ______ cm, and
(b) an area of ______ cm².
30. The amount of water in the container shown on the right is ______ mL. The capacity of the whole container is ______ L.

31. Tim and his family cycled to a barbecue site, which was 15 km away. They arrived at the barbecue site 25 minutes later. Find their average cycling speed in km/h.
(Show your working)

32. Which of the 3-D shapes below has 5 vertices, 8 edges and 5 faces?

   ○ A. [Diagram of a pyramid]
   ○ B. [Diagram of a tetrahedron]
   ○ C. [Diagram of a cube]
   ○ D. [Diagram of a cuboid]
33. Peter tries to form the following quadrilaterals with the two sets of sticks (each has four sticks) shown below.

A. square  B. rectangle  C. parallelogram
D. rhombus  E. trapezium

Set (1)  Set (2)

(a) Which two kinds of quadrilaterals can be formed by the sticks in Set (1)? Write the letters for your answer.

Answer: 

(b) Which two kinds of quadrilaterals can be formed by the sticks in Set (2)? Write the letters for your answer.

Answer: 

34.

(a) Identify the angles in the above figure. Write the letter(s) for your answer.

(i) _______ is / are right-angle(s).

(ii) _______ is / are acute angle(s).

(iii) _______ is / are obtuse angle(s).

(b) Arrange the above angles in descending order.

Answer: _______ , _______ , _______ , _______  (largest)  (smallest)
35. (a) The captain walks towards the _______ and (direction) comes to the forest. Then he walks towards the _______ to reach the city. (direction)

(b) The captain wants to find the shortest route from his original position to reach the treasure. First he walks towards the _______ and comes to the (direction) _______. Then he walks due _______ to reach the treasure.

36. The average of 56, 147, 152 and 201 is _______.

37. Solve the equation:
   
   \[ a + 28 = 45 \]

   \[ a = \]
38. An electricity bill is sent to each customer every 2 months. The following bar chart shows the amount of electricity used by Mr. Chan's family last year.

![Bar Chart: Amount of Electricity Used by Mr. Chan's Family Last Year]

(a) The electricity bill for the month of __________ showed the amount of electricity used in that 2-month period was the smallest, and the amount of electricity used was ______ units.

(b) The electricity bill for February showed the amount of electricity used is ______% of that for August.

(c) The electricity bill for the month of __________ showed the amount of electricity used was the largest. It is because ____________________________

______________________________.
39. The pictogram below shows the number of rolls of film developed by Beauty Photo Shop each day this week.

**Number of Rolls of Film Developed Each Day This Week**

1 📽️ represents 10 rolls

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>📽️</td>
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<td>📽️</td>
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<td>📽️</td>
</tr>
</tbody>
</table>

**Day of the week**

(a) The busiest day is ________, with a total number of ________ rolls of film developed.

(b) The average number of rolls of film developed each day is ________.

(c) The total number of rolls of film developed this week is 70% of that last week. The total number of rolls of film developed last week was ________.
40. The staff of Fresh Juice Shop recorded the sales of the day. The results are as follows.

<table>
<thead>
<tr>
<th>Types of fruit juice</th>
<th>Orange</th>
<th>Apple</th>
<th>Papaya</th>
<th>Grape</th>
<th>Pear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cups</td>
<td>50</td>
<td>40</td>
<td>90</td>
<td>60</td>
<td>20</td>
</tr>
</tbody>
</table>

According to the above data, complete the bar chart below.

**Total Sales of The Day**

Types of fruit juice

Pear
Grape
Papaya
Apple
Orange

Number of cups

0 20 40 60 80 100
41. Which of the following is an equation?

- A. $8a > 18$
- B. $17 - 2b$
- C. $0.3 + H = 18$
- D. $83 + 3 = 86$

42. John is a member of the school ping-pong team. He spends $214 on 3 tubes of ping-pong balls and a bat. The bat costs him $190. **Use the method of solving equation**, find the price of one tube of ping-pong balls. (Show your working)

Let $x$ be the price of one tube of ping-pong balls.

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END OF PAPER ---