Education and Manpower Bureau
Territory-wide System Assessment 2007
Primary 6
Mathematics

Instructions:
1. There are 42 questions in this test.
2. Answer all questions.
3. Time allowed is 50 minutes.
4. Use of calculators is not allowed.
5. Write your answers in this Question-Answer 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 boxes 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
此格只許填寫一個大楷英文字母
1. When 607 is divided by 20, the quotient is _______ and the remainder is ______.

2. $17 \div 6 \times 24 = \square$

3. $\frac{5}{6} + 1\frac{5}{8} = \square$

4. $\frac{4}{9} \times \frac{3}{8} \times 2\frac{1}{6} = \square$

5. $7.5 + 8.9 - 11.06 = \square$

6. $27.54 \div 9 = \square$

7. A toy shop is having its summer sale. Estimate which of the following toys is the **most expensive** during the sale.

<table>
<thead>
<tr>
<th>Toys</th>
<th>Marked Price</th>
<th>Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Toy Truck</td>
<td>$419.90</td>
<td>20%</td>
</tr>
<tr>
<td>B. Video Game</td>
<td>$359.90</td>
<td>20%</td>
</tr>
<tr>
<td>C. Doll</td>
<td>$511.90</td>
<td>50%</td>
</tr>
<tr>
<td>D. Airplane Model</td>
<td>$425.90</td>
<td>50%</td>
</tr>
</tbody>
</table>
8. In the number 0.571, the value of the digit ‘7’ is _______.

9. 160 is the 4\(^{th}\) common multiple of 8 and 20, while 320 is the ______\(^{th}\) common multiple of 8 and 20.

10. How many common factors do 36 and 60 have altogether? Answer: ______

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

\[
\frac{5}{8} = \frac{25}{24} = \underline{\hspace{2cm}}
\]

12. Who has eaten the least and who has eaten the most of the pizza?

Answer: ______ has eaten the least, and ______ has eaten the most of the pizza.
13. 32 is a * factor / multiple (*circle the answer) of 4, while 4 is a * factor / multiple (*circle the answer) of 32.

14. Express the shaded part as a fraction and also as a percentage of the whole diagram.

(a) As a fraction: 

(b) As a percentage: ______ %

15. (a) Change the following percentage into a decimal.

206% = ______

(b) Change the following decimal into a percentage.

0.074 = ______ %

16. In the diagram below, the belt is sold at a discount of ______ %.

**Clearance Sale**

Original Price: $180.00
Special Price: $153.00
17. \( \frac{1}{2} \) dozen egg puddings weigh \( 439\frac{1}{5} \) g. What is the average weight of each egg pudding? (Give the answer as a fraction.)

Answer: The average weight is \( \underline{\text{ } } \) g.

18. The distance between the two minibus stops A and B is 16.4 km. A minibus makes 8 **round trips** between stops A and B every day (a round trip means going from stop A to stop B, and then back to stop A). Altogether it travels \( \underline{\text{ } } \) km daily.

19. The diagram on the right is a shopping receipt from a supermarket. How much money has the customer saved?

<table>
<thead>
<tr>
<th>Item</th>
<th>Original Price</th>
<th>Special Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mango</td>
<td>$25.80</td>
<td>$20.90</td>
</tr>
<tr>
<td>Rice Cake</td>
<td>$17.40</td>
<td>$16.60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$37.50</strong></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$40.00</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>$2.50</td>
<td></td>
</tr>
</tbody>
</table>

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Staff: 789  T# 12345

Answer: The customer has saved \( \underline{\text{ } } \) dollars and \( \underline{\text{ } } \) cents.
20. A dining table and four chairs altogether cost $3490. If the dining table costs $1990, how much does one chair cost?  
(Show your working)

21. A family goes to a farm to pick lychee. Mum picks $3\frac{1}{4}$ kg of lychee, Jane picks $1\frac{2}{5}$ kg less than Mum, and Dad picks $2\frac{1}{2}$ kg more than Jane.  
(a) Jane picks _______ kg of lychee.  
(b) How many kg of lychee does Dad pick?  
(Show your working)
June

<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>
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<td>3</td>
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<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
</tr>
</tbody>
</table>

(a) The third Tuesday of the month is a holiday. The holiday is on the _____ of _____________.
    (month)

(b) Mike’s birthday is on the 11th of June. Mum wants to hold his birthday party on the nearest Saturday, which is the _____ of _____________.
    (month)

(c) On the fourth Thursday of the month, Mike starts a 5-day camping activity. The camping activity ends on the _____ of _____________.
    (month)

23. In the diagram on the right, O is the centre of the circle.

(a) The straight line OC is a _____________ of the circle, the straight line AB is a _____________ of the circle,

and the length of AB is ______ times that of OC.

(b) The circumference of the circle is about ______ times the length of AB. (Answer with a whole number.)
24. Fill in each of the blanks below with a suitable unit of capacity.

(a) The capacity of a rubbish bin is about 20 ________.

(b) A bottle of family-sized shampoo contains about 800 ________ of shampoo.

(c) A bath tub can hold about 450 ________ of water.

25. The shape on the right is made up of a square and an equilateral triangle. If the perimeter of the equilateral triangle is 30 cm, find the perimeter of the whole shape.

○ A. 150 cm  ○ B. 70 cm
○ C. 60 cm  ○ D. 50 cm

26. The diameter of a wheel is 50 cm. It makes 3 complete turns on a flat surface. How far does the wheel go? (Take \( \pi \) as 3.14.)

○ A. 157 cm  ○ B. 314 cm
○ C. 471 cm  ○ D. 942 cm

27. In the diagram on the right, the side of each small square is 1 cm. The area of the shaded part is _________. (Give the answer with a unit.)
28.

(a) In the above diagram, the area of the parallelogram is ______ cm².

(b) Find the area of the shaded part in the above diagram. (Show your working)

29.

The three solids shown above are made up of cubes. The volume of each cube is 5 cm³. Solid * A / B / C (*circle the answer) has the smallest volume, and it differs in volume from the largest solid by ______ cm³.
30. A coral rock with a volume of 3000 cm\(^3\) is dropped into the above aquarium. When compared to the original water level, by how many cm will the water level rise?
Answer: The water level will rise by ______ cm.

31. A wind surfing board has sailed 360 m in 45 seconds. What is the average sailing speed in m/s?
Answer: The average sailing speed is ______ m/s.

32. Which of the following 3-D shapes has 5 faces, 9 edges and 6 vertices?

○ A.  

○ B.  

○ C.  

○ D.
33. Study the following objects. Write the letter(s) for the answer.

(a) Prism(s)/Cylinder(s): ______________________
(b) Pyramid(s)/Cone(s): ______________________
(c) Sphere(s): ______________________
(d) Others: ______________________

34. Solve the equation:

   \[ 43 = 2x + 7 \]

   \[ x = \square \]
35. Study the following triangles. Write the letter(s) for the answer.

(a) Isosceles triangle(s): ________________

(b) Equilateral triangle(s): ________________

(c) Right-angled triangle(s): ________________

36. Which of the above 2-D shapes has/have two pairs of equal opposite sides and two pairs of equal opposite angles? Write the letter(s) for the answer.

Answer: ________________

(b) Which of the above 2-D shapes has/have both parallel lines and perpendicular lines? Write the letter(s) for the answer.

Answer: ________________
37. Study the diagram below. Which of the following statements is correct?

○ A. Angle C and Angle D are equal
○ B. Angle E is the smallest
○ C. Angle D is bigger than Angle B
○ D. Angle A is smaller than Angle C

38. Which of the following are equations? Write the letters for the answer.

A. $23 + 3k$
B. $2 = \frac{w}{9}$
C. $30 - \frac{h}{4} = 4$
D. $12 = 20 - 8$
E. $3(a+7)$

Answer: __________________________
39. Fanny has $x$ for pocket money each day. She spends $\frac{2}{5}$ of her pocket money on bus fare daily.

(a) If Fanny spends $16$ on bus fare daily, which of the following equations can be used to find the amount of pocket money she has each day?

- A. $\frac{2}{5}x = 16$
- B. $\frac{5}{2}x = 16$
- C. $\frac{2}{5} = 16x$
- D. $x - \frac{2}{5} = 16$

(b) Fanny has $\underline{\hspace{2cm}}$ for pocket money each day.

40. There are 10 persons in a lift and altogether they weigh 625 kg.

(a) What is the average weight of each person?

   Answer: The average weight of each person is $\underline{\hspace{2cm}}$ kg.

(b) When the lift reaches a certain floor, a person weighing 74 kg gets off and a child weighing 24 kg gets on. Has the average weight of each person in the lift increased or decreased? Why?

   Answer: The average weight of each person in the lift has *increased* / *decreased* (*circle the answer).

   This is because \underline{\hspace{2cm}}.
41. The following bar chart shows Mr. Wong's total spending last month.

**Mr. Wong's Total Spending Last Month**

<table>
<thead>
<tr>
<th>Spending items</th>
<th>Amount (thousand dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>2</td>
</tr>
<tr>
<td>Entertainment</td>
<td>1</td>
</tr>
<tr>
<td>Food</td>
<td>3</td>
</tr>
<tr>
<td>Rent</td>
<td>5</td>
</tr>
<tr>
<td>Donations</td>
<td>0.5</td>
</tr>
<tr>
<td>Education</td>
<td>1.5</td>
</tr>
</tbody>
</table>

(a) Mr. Wong spent the same amount of money on

___________ and ___________ last month.

He spent $ __________ on each of these two items.

(b) Express the amount of money spent on food last month as a fraction of that spent on rent.

Answer: The fraction is _______.

(c) Mr. Wong's total income last month was $20 000.

After all his spending, he still has $ ________ left.
42. A school conducted a survey on P.6 students’ purposes for using the internet. The following table shows the survey results:

<table>
<thead>
<tr>
<th>Purposes for Using the Internet</th>
<th>Playing Games</th>
<th>Searching for Information</th>
<th>Listening to Music</th>
<th>Chatting with Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>50</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>

Construct a pictogram using the above information and give it a suitable title.

(Title)

1 😊 represents 10 students

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END OF PAPER