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 44 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楷英文字母
1. In the number 41 327,
   (a) the digit in the units place is _______, and
   (b) the value of the digit ‘3’ is _______.

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

Answer: The shaded part is \[ \square \] of the whole figure.

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

Answer: \[ \square \]

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

Answer: \[ \square \]
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. Which of the following numbers has ‘4’ in its hundredths place?

- A. 5.3146
- B. 53.146
- C. 531.46
- D. 5314.6

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. \[ 10.23 + 6.8 - 5.4 = \ \_\_\_\_\_\_\_ \]

17. \[ 14.7 \div 3.5 = \ \_\_\_\_\_\_\_ \]

18. There are 392 soldiers. Half of them have special training. If these soldiers are queued up in rows of seven, how many rows are there?

Answer: There are \_\_\_\_\_\_\_ rows.

19. Which of the following fractions are equal to 1?

\[ \frac{1}{5}, \frac{7}{7}, \frac{4}{8}, \frac{16}{16}, \frac{9}{19} \]

Answer: \_\_\_\_\_\_\_
20. In a weightlifting competition, the champion lifted $155\frac{1}{2}$ kg. The second runner-up lifted $12\frac{1}{4}$ kg lighter than the champion. The first runner-up lifted $5\frac{2}{3}$ kg heavier than the second runner-up.

(a) The second runner-up lifted _________ kg.

(b) What was the weight lifted by the first runner-up? (Show your working)
**Bestbuy Supermarket**

Stamp Collection Card 😊

**How to redeem**

1<sup>st</sup> to 5<sup>th</sup> stamps:
Each stamp can redeem a carton of drink at a price of $2.20.

6<sup>th</sup> to 10<sup>th</sup> stamps:
Each stamp can redeem a carton of drink at a price of $1.50.

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
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<tbody>
<tr>
<td>😊</td>
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<td>😊</td>
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</tbody>
</table>

<table>
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<tr>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
<th>10.</th>
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<tr>
<td>😊</td>
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<td></td>
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</tbody>
</table>

The diagram above shows a stamp collection card from Bestbuy Supermarket. If the customer redeems cartons of drinks with all the stamps on the card, how much should he pay?

(Show your working)
22. **Speedy Post Company**

$24$ per kg  
plus a basic charge of $\$12.50$ per parcel

The cost of posting the parcel in the above diagram is $\$ \underline{\phantom{000}}$.

23. (a) Change $153\%$ into a decimal.

Answer: $\underline{\phantom{000}}$

(b) Change $0.425$ into a percentage.

Answer: $\underline{\phantom{000}}\%$
24. Which of the following figures has 25% of the whole shaded?

- A.
- B.
- C.
- D.

25. 

Original price $140.00

All Items 15% Off

After the discount, the selling price of the shirt in the diagram is $______.

26. Fill in each blank below with a suitable unit of capacity.

(a) The capacity of a bathroom sink is about 10 ______.

(b) The capacity of a coffee cup is about 200 ______.
27. The timetable below shows the Secondary One orientation programme.

<table>
<thead>
<tr>
<th>Starting time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Speech of Principal</td>
</tr>
<tr>
<td>14:30</td>
<td>Student Sharing</td>
</tr>
<tr>
<td>14:45</td>
<td>Games</td>
</tr>
<tr>
<td>15:30</td>
<td>Group Discussion</td>
</tr>
<tr>
<td>16:15</td>
<td>Campus Tour</td>
</tr>
<tr>
<td>16:45</td>
<td>Question and Answer</td>
</tr>
</tbody>
</table>

(a) ____________ is in progress at 3:10 p.m.
    (Activity)

(b) Draw the hour hand and the minute hand on the clock face below to show the starting time of Group Discussion.

![Clock Diagram]
28. Study the diagram above. Which of the following statements is correct?

- A. The weights of ○ and □ are equal
- B. □ is heavier than ○
- C. ○ is heavier than □
- D. The weights of ○ and □ cannot be compared

29. The shape below is made up of two identical equilateral triangles and a square. The side of the square is 8 cm. Find the perimeter of the whole shape.

- A. 40 cm
- B. 48 cm
- C. 56 cm
- D. 60 cm
30. Which of the following is correct?

- A. diameter $\div \pi = \text{circumference}$
- B. diameter $\times \text{circumference} = \pi$
- C. circumference $\div \text{diameter} = \pi$
- D. diameter $\div \text{circumference} = \pi$

31. Which of the following figures has the smallest shaded area?

- A.
- B.
- C.
- D.
32. The area of the figure above is ____ m².

33. (a) According to the diagrams above, the volume of ⭐ is ____ cm³.

(b) Draw the water level on the beaker below.
The volume of the solid above is ______ cm³.

35. A ship sails to an island 143 km away at a speed of 26 km/h.
(a) How long does the ship take to sail to the island? (Show your working)

(b) If the ship departs at 11:30 a.m., it will reach the island at ______ : ______ * a.m. / p.m. (*circle the answer)
36. A fruit shop sells apples and oranges. There are $x$ apples. The number of oranges is 3 less than that of apples. There are (________) oranges in the shop.

37. $k + 13 = 100$

$$k = \boxed{\phantom{0}}$$

38. $2y - 10.5 = 0.5$

$$y = \boxed{\phantom{0}}$$

39. There are 6 eggs in a box. The original price of a box of eggs is $B$. The price of a box of eggs is increased by $2 and each egg now costs $1 on average. Which of the following equations can be used to find the original price of a box of eggs?

- A. $6B + 2 = 1$
- B. $\frac{B}{6} + 2 = 1$
- C. $\frac{B + 2}{6} = 1$
- D. $6(B + 2) = 1$
40. In the diagram on the right, B and C are the centres of the two circles. A, B, C and D lie on the same straight line.

(a) BC is a _________ of both circles.

(b) In the diagram, *AB / AC / AD / BC / BD / CD are diameters of the circles. (*circle all answers)

41. Study the following shapes. Write the letter(s) for the answer.

(a) Right-angled triangle: _____________
(b) Isosceles triangle: _____________
(c) Circle: _____________
(a) Jenny goes to the east from the Telephone Booth and reaches the _______________.

(b) The Telephone Booth is to the __________ of the Canteen. (direction)

(c) Sam goes __________ from the Photo Gallery. (direction)

After passing the Box Office, he goes __________ and reaches the Shop. (direction)
43. The following pictogram shows the production of a canned food factory in the past 5 months.

**Production of a Canned Food Factory in the Past 5 Months**

Each □ represents ten thousand cans

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
</tr>
</thead>
</table>

(a) The number of cans produced in March is __________ more than that in February.

(b) The number of cans produced in February is twice that in __________.

(month)

(c) The average number of cans produced in the past 5 months is __________ per month.

(d) Express the number of cans produced in January as a fraction of that in May.

Answer: The fraction is □ .
44. The following table shows the production of a car factory in the four quarters last year.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>First quarter</th>
<th>Second quarter</th>
<th>Third quarter</th>
<th>Fourth quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cars produced</td>
<td>328</td>
<td>270</td>
<td>231</td>
<td>195</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 number of cars produced in each quarter to the nearest tens and complete the above table.

(b) Construct a bar chart with the data rounded to the nearest tens, and give it a suitable title.