# Assessment Test for Singapore Primary Mathematics 5B
This test covers material taught in Primary Mathematics 5B
(http://www.singaporemath.com/)

1. Consider the number 12.406
   (a) What is the value of the digit in the tenths place? ______  [1]
   (b) What digit is in the hundredths place? ______  [1]
   (c) What is difference between this number and 12.4? ______  [1]
   (d) Fill in the blanks with a whole number or a fraction.
      
      \[12.406 = 1 \times _____ + 2 \times _____ + 4 \times _____ + 6 \times _____\]

2. Write >, <, or = in each
   (a) 0.205 \(\bigcirc\) \(\frac{25}{1000}\)  [2]
   (b) 4.10 \(\bigcirc\) 4.1  [2]
   (c) 3.1 – 0.46 \(\bigcirc\) 2 + 0.06  [2]
   (d) 0.89 \(\times\) 7 \(\bigcirc\) 7  [2]
   (e) 17.4 \(\div\) 5 \(\bigcirc\) \(\frac{3}{10}\)  [2]
   (f) 3 – 0.12 \(\bigcirc\) \(\frac{8}{9}\)  [2]

3. Multiply or divide. Use mental calculation.
   (a) 0.4 \(\times\) 100 = _______  [2]
   (b) 0.008 \(\times\) 1,000 = _______  [2]
   (c) 56.8 \(\div\) 100 = _______  [2]
   (d) 0.007 \(\div\) 0.01 = _______  [2]
   (e) 400 \(\times\) 0.8 = _______  [2]
   (f) 120 \(\div\) 0.02 = _______  [2]

4. Find the equivalent measures.
(a) \(0.04 \text{ m} = \underline{\text{______ cm}}\)  
(b) \(6.25 \text{ lb} = \underline{\text{____ lb}} \underline{\text{____ oz}}\) \[2\]

(c) \(35 \text{ ml} = \underline{\text{______ liters}}\)  
(d) \(0.75 \text{ ft} = \underline{\text{______ in.}}\) \[2\]

5. Multiply or divide. Give an estimate first.

(a) \(17.02 \times 43\)  
(b) \(8.1 \times 2.19\)  
Estimate: \(\underline{\text{_________}}\)  
Answer: \(\underline{\text{_________}}\)  
Estimate: \(\underline{\text{_________}}\)  
Answer: \(\underline{\text{_________}}\) \[4\]

(c) \(11.25 \div 18\)  
(d) \(89.96 \div 0.04\)  
Estimate: \(\underline{\text{_________}}\)  
Answer: \(\underline{\text{_________}}\)  
Estimate: \(\underline{\text{_________}}\)  
Answer: \(\underline{\text{_________}}\) \[4\]

6. Find the following correct to 2 decimal places
7. The total cost of 4 lb of fish and 3 lb of meat is $42.40. If 1 lb of fish costs $3.25 more than 1 lb of meat, what is the cost of 1 lb of meat?

8. The length of one side of a cube is 1 yd. What is its volume in cubic feet?

9. Find the volume the rectangular prism and cube.

(a) \[ 8 \text{ m} \times 5 \text{ m} \times 3 \text{ m} \]

(b) 15 in.
10. The following figure is made from centimeter cubes. Find the volume.  

![Figure 1](image1.png)

Volume = 9 cm \times 3 cm \times 4 cm = 108 \text{ cm}^3

11. The area of one side of a rectangular prism is 72 cm$^2$, and its volume is 360 cm$^3$. What is the length of the unknown edge?

\[ AB = \sqrt{\frac{Volume}{Area}} = \sqrt{\frac{360}{72}} = \sqrt{5} \text{ cm} \]

![Figure 2](image2.png)

Volume = 360 cm$^3$

12. A rectangular tank measuring 25 cm by 16 cm by 26 cm is to be filled with water to a depth of 18 cm. How much more water is needed to fill the tank? Give your answer in liters. (1 liter = 1000 cm$^3$)

\[ \text{Volume of tank} = 25 \text{ cm} \times 16 \text{ cm} \times 26 \text{ cm} = 9400 \text{ cm}^3 \]

\[ \text{Volume of water} = 25 \text{ cm} \times 16 \text{ cm} \times 18 \text{ cm} = 8160 \text{ cm}^3 \]

\[ \text{More water needed} = 9400 \text{ cm}^3 - 8160 \text{ cm}^3 = 1240 \text{ cm}^3 = 1.24 \text{ liters} \]
<table>
<thead>
<tr>
<th>Question</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.</td>
<td>How many 4-cm cubes can fit into a rectangular box 1 m long, 0.4 m wide, and 0.6 m high?</td>
</tr>
<tr>
<td>14.</td>
<td>A rectangular container 8 cm long and 9 cm wide was filled with water to a depth of 6 cm. When 12 marbles of equal size were added to the container, the depth of the water became 7.5 cm. Find the volume of one marble.</td>
</tr>
<tr>
<td>15.</td>
<td>Find the average of 21.4, 18.2, and 65.7.</td>
</tr>
<tr>
<td>17.</td>
<td>The average weight of 3 packages is 2 kg 750 g. The average weight of 2 of them is 3 kg 200 g. Find the weight of the third package. Give your answer in kg and g.</td>
</tr>
</tbody>
</table>
18. Valerie recorded the weights of some mature dogs of a certain small breed that were brought to the veterinarian clinic to the nearest quarter of a pound.

<table>
<thead>
<tr>
<th>Weight in pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>5 3/4</td>
</tr>
<tr>
<td>3 3/4</td>
</tr>
<tr>
<td>5 1/2</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>6 1/4</td>
</tr>
<tr>
<td>4 1/2</td>
</tr>
<tr>
<td>5 3/4</td>
</tr>
<tr>
<td>5 1/2</td>
</tr>
<tr>
<td>5 1/4</td>
</tr>
<tr>
<td>6 1/2</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>4 3/4</td>
</tr>
<tr>
<td>5 1/2</td>
</tr>
</tbody>
</table>

(a) Create a line plot from the data. [2]

(b) What is the difference between the heaviest and lightest weight recorded? [1]

(c) What fraction of the dogs weigh the most common weight recorded? [1]

(d) What is the average of the data? [2]
19. (a) Write the ordered pair for each of the points.

A: _______  B: _______
C: _______  D: _______

(b) Draw a point at (6, 10).

(c) Which coordinates, the first or the second, of the ordered pairs do you subtract to find the distance between A and C?

20. A rectangle has coordinates (4, 3), (4, 10), (10, 10), and (10, 3) on a grid with 1 centimeter squares. What is area of the rectangle?
21. (a) In Sequence A, each number is obtained by adding 2 to the previous number. Complete the table.

<table>
<thead>
<tr>
<th>Term (x)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number (y)</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x, y)</td>
<td>(1, 2)</td>
<td>(2, 4)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) In Sequence B, each number is obtained by adding 3 to the previous number. Complete the table.

<table>
<thead>
<tr>
<th>Term (x)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number (y)</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(x, y)</td>
<td>(1, 3)</td>
<td>(2, 6)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Plot both sets of ordered pairs on the graph at the right and connect the points in each set. Describe what happens to the distance between the two line as x increases.
22. Water is flowing from a tap into a tank. Every minute 25 gallons of water is added to the tank.

(a) Complete this table for the amount of water in the tank.

<table>
<thead>
<tr>
<th>Time (min)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount (gal)</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Plot these points in a line graph.

(c) Use the graph to estimate to the nearest tenth of a minute how long it takes until there is 120 gallons in the tank _______
23. The following figures are not drawn to scale. Find the unknown marked angle in each.

(a) ABC is a straight line. BCD is an equilateral triangle.

(b) ABCD is a quadrilateral.

(c) ABCD is a parallelogram.

(d) ABC is a straight line. BCDE is a rhombus.
24. Express each as a percentage.
   (a) 0.47
   (b) $\frac{6}{15}$
   (c) 215 out of 500

25. Express as a decimal and as a fraction in its simplest form.
    85%  Decimal: _________  Fraction: __________

26. John had $75. He spent $15 on a book. What percentage of his money does he have left?

27. The normal price of a camera was $76. At a sale it was sold at a discount of 15%. What was the selling price of the camera?
Answer Key

1. (a) 0.4  
   (b) 0  
   (c) 0.006  
   (d) $10; 1; \frac{1}{10}; \frac{1}{1000}$

2. (a) $>$  
   (b) $=$  
   (c) $>$  
   (d) $<$  
   (e) $>$  

3. (a) 40  
   (b) 8  
   (c) 0.568  
   (d) 0.7  
   (e) 320  
   (f) 6,000

4. (a) 4 cm  
   (b) 6 lb 4 oz  
   (c) 0.035 L  
   (d) 9 in.

5. (a) 800; 731.86  
   (b) 16; 17.739  
   (c) 0.5; 0.625  
   (d) 2,000; 2,249

6. (a) 713.57  
   (b) 2.89

7. $4.20$

8. 27 ft$^3$

9. (a) 120 m$^3$  
   (b) 3,375 cm$^3$

10. 216 cm$^3$

11. 5 cm

12. 3.2 liters

13. 3,750 4-cm cubes

14. 9 cm$^3$

15. 35.1

16. 17

17. 1 kg 850 g

18. (a)

   (b) $9\frac{3}{4}$ lb  
   (c) $1\frac{5}{6}$  
   (d) $\frac{5}{2}$ lb

19. (a) A: (4, 9)  
   B: (9, 5)  
   C: (4, 3)  
   D: (10, 2)  
   (b) Check placement of point.  
   (c) second

20. 42 cm$^2$

21. (a) $\begin{array}{cccc} 
x & 3 & 4 & 5 \\
y & 6 & 8 & 10 \\
\end{array}$
   (b) $\begin{array}{cccc} 
(x, y) & (3, 6) & (4, 8) & (5, 10) \\
\end{array}$
   (c) The distance between the points increases by 1 for each increase of 1 in $x$.

22. (a)

   (b)

   (c) 4.8 (accept 4.7 or 4.9)

23. (a) 85°  
   (b) 85°  
   (c) 32°  
   (d) 65°

24. (a) 47%  
   (b) 40%  
   (c) 43%

25. 0.85; $\frac{17}{20}$

26. 80%

27. $64.60$