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Contents

Paper PLSC01

Sample Assessment Material 1
Sample Mark Scheme 21
General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate’s response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate’s response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
Mathematics
Year 6
Achievement Test
Sample Assessment Material
Time: 1 hour

You do not need any other materials.

Total Marks

Instructions
• Use black ink or ball-point pen.
• Fill in the boxes at the top of this page with your name, centre number and candidate number.
• Answer all questions.
• Answer the questions in the spaces provided – there may be more space than you need.
• Calculators are NOT allowed.

Information
• The total mark for this paper is 60.
• The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice
• Read each question carefully before you start to answer it.
• Try to answer every question.
• Check your answers if you have time at the end.
**SECTION A**

**Answer ALL questions.**

In Section A put a cross in one box ☑ to indicate your answer. If you change your mind, put a line through the box ☒ and then put a cross in another box ☑.

Each question in Section A is worth one mark.

1. \(47 + 26 =\)
   - 613
   - 63
   - 73
   - 72
   
   [ ] 613
   [ ] 63
   [ ] 73
   [ ] 72

2. Which of these numbers is a factor of 12?
   - 24
   - 5
   - 10
   - 4
   
   [ ] 24
   [ ] 5
   [ ] 10
   [ ] 4

3. Here is a square.

   ![Square](image)

   How many lines of symmetry does a square have altogether?
   - 1
   - 2
   - 3
   - 4
   
   [ ] 1
   [ ] 2
   [ ] 3
   [ ] 4

4. There are 23 packets of cakes on a shelf.
   Each packet holds 6 cakes.
   How many cakes are there in total?
   - 128
   - 120
   - 148
   - 138
   
   [ ] 128
   [ ] 120
   [ ] 148
   [ ] 138
5 What is the special name of this triangle?

- isosceles
- right-angled
- equilateral
- scalene

6 The temperature in Moscow one morning was –7°C.
By midday the temperature was 3°C higher.
What was the temperature at midday?

- 10°C
- –4°C
- –10°C
- 4°C

7 Here are nine numbers.

2 3 4 4 5 6 6 6 9

The mode is

- 6
- 5
- 7
- 4

8 How many faces does a cube have?

- 12
- 6
- 8
- 4
9 The diagram shows a shaded shape drawn on a centimetre grid.

What is the perimeter of the shaded shape?

18 cm  
26 cm  
22 cm  
24 cm

10 Which one of these fractions is not equivalent to \( \frac{2}{5} \)?

\[
\begin{array}{cccc}
8 & 15 & 10 & 16 \\
20 & 50 & 25 & 40 \\
\end{array}
\]

11 560 – 237 =

337  
327  
323  
313
12 748 when rounded to the nearest hundred is

7 800 700 750

13 Seven children did a quiz.
Here are their scores.

2 10 2 2 6 6 7

The range of their scores is

2 6 8 5

14 Which of these numbers are prime numbers?

2 6 7 9 12 15

2 and 9 6 and 7 9 and 15 2 and 7

15 (9 - 2) × 5 =

30 -1 45 35
16

The coordinates of point A are

(2, 4)  (4, 2)  (-2, 4)  (4, -2)

17  8a + 7 + 2a - 3 =

14a  10a - 10  10a + 4  6a + 4

18 Which one of these numbers is a square number?

10  60  2  36

© Edexcel Ltd 2011 Sample Assessment Material Edexcel International Primary Curriculum
Sanghita has a bag of 12 counters.

3 of the counters are red.
2 of the counters are blue.
The rest of the counters are yellow.

Sanghita takes at random a counter from the bag.
What is the probability that the counter is yellow?

\[
\begin{array}{cccc}
\frac{5}{7} & \frac{7}{12} & \frac{3}{12} & \frac{2}{12} \\
\square & \square & \square & \square \\
\end{array}
\]

Carol is \(x\) years old.

Sam is 5 years older than Carol.
Sam’s age in years is

\[
\begin{array}{cccc}
\times - 5 & 5\times & \times + 5 & 5 - x \\
\square & \square & \square & \square \\
\end{array}
\]

TOTAL FOR SECTION A IS 20 MARKS
SECTION B

Answer ALL questions.

21 Here is a sequence of patterns made from sticks.

\[ \begin{array}{ccc}
\text{Pattern 1} & \text{Pattern 2} & \text{Pattern 3} \\
\hline
\end{array} \]

The sequence continues in the same way.

(a) Draw pattern 4

(b) Complete the table.

<table>
<thead>
<tr>
<th>Pattern</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sticks</td>
<td>4</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Total for Question 21 is 3 marks)
22 (a) The scale shows how much water there is in a water tank.

How many litres of water are there in the tank?

............................... litres

(1)

(b) What mass is the arrow pointing to on this scale?

............................... kg

(1)

(Total for Question 22 is 2 marks)
23 Fred asked some of his friends the name of their favourite sport.

He drew a pictogram to show his results.

<table>
<thead>
<tr>
<th>Sport</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennis</td>
<td>o o o o</td>
</tr>
<tr>
<td>Football</td>
<td>o o o o o</td>
</tr>
<tr>
<td>Basketball</td>
<td>o o (</td>
</tr>
<tr>
<td>Hockey</td>
<td>o o o (</td>
</tr>
<tr>
<td>Netball</td>
<td>o o</td>
</tr>
</tbody>
</table>

Key:  
○ represents 2 people

(a) Which sport was the most popular?

...............................

(1)

(b) How many people chose tennis?

...............................

(1)

(c) Which sport was chosen by exactly 7 people?

...............................

(1)

(Total for Question 23 is 3 marks)
24 (a) Work out $\frac{1}{2}$ of 28 dollars.

........................... dollars

(1)

George buys

1 packet of chips costing 85 cents.
1 packet of cakes costing 3.28 dollars.

1 dollar equals 100 cents.
He pays with a 10 dollar note.

(b) How much change should George get?

...........................

(2)

(Total for Question 24 is 3 marks)
25  (a) Which metric unit would you use to measure the distance from London to New Delhi?

(b) Measure the length of the line shown below.
   Give your answer in centimetres.

(c) Here is a rectangle.

Work out the area of this rectangle.

(Total for Question 25 is 3 marks)

26  (a) Write 37% as a fraction.

(b) Work out 25% of 36

(Total for Question 26 is 2 marks)
27 (a) Write these numbers in order of size

0.67   0.6   0.07   0.76

Start with the smallest number.

.......................................................................................................................... (1)

(b) Write 0.6 as a percentage.

............................... %

(1)

(c) Write 0.07 as a fraction.

.......................................................................... (1)

(Total for Question 27 is 3 marks)
28 Harry kept a record of the number of goals his football team scored in each of 20 matches.

3 2 4 1 3 2 3 1 0 1
0 2 1 1 2 3 1 0 4 2

(a) Use this information to complete the tally chart.

<table>
<thead>
<tr>
<th>Number of goals</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) On the grid, draw a bar chart to represent this information.

(Total for Question 28 is 4 marks)
(a) Describe the translation of shape A onto shape B.

(1)

(b) Reflect the triangle in the line $x = 2$

(Total for Question 29 is 3 marks)
31 Ben goes to a cafe. He can choose one main course and one dessert.

<table>
<thead>
<tr>
<th>Main Course</th>
<th>Dessert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pizza</td>
<td>Fruit</td>
</tr>
<tr>
<td>Burger</td>
<td>Ice cream</td>
</tr>
<tr>
<td>Steak pie</td>
<td></td>
</tr>
</tbody>
</table>

Write down all the possible combinations of main course and dessert Ben can choose.

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

(Total for Question 31 is 2 marks)

30 (a) Simplify fully \(4f - 8f + 7f\)

...............................  (1)

(b) Multiply the brackets out \(4(a + 5)\)

...............................  (1)

(c) Solve \(k - 15 = -7\)

\(k = \) ...............................  (1)

(d) Solve \(4x + 7 = 31\)

\(x = \) ...............................  (2)

(Total for Question 30 is 5 marks)
31 Ben goes to a cafe.

He can choose one main course and one dessert.

<table>
<thead>
<tr>
<th>Main Course</th>
<th>Dessert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pizza</td>
<td>Fruit</td>
</tr>
<tr>
<td>Burger</td>
<td>Ice cream</td>
</tr>
<tr>
<td>Steak pie</td>
<td></td>
</tr>
</tbody>
</table>

Write down all the possible combinations of main course and dessert Ben can choose.

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................

(Total for Question 31 is 2 marks)
32 Here is a shape.
All the corners are right angles.

Diagram NOT accurately drawn

Work out the area of this shape.

\[ \text{Area} = \text{length} \times \text{width} \]

\[ \text{Area} = 12 \text{ cm} \times 3 \text{ cm} + 3 \text{ cm} \times 4 \text{ cm} \]

\[ \text{Area} = 36 \text{ cm}^2 + 12 \text{ cm}^2 \]

\[ \text{Area} = 48 \text{ cm}^2 \]

\[ \text{Area} = 48 \text{ cm}^2 \]

(Total for Question 32 is 3 marks)
33 (a) Complete the table of values for \( y = 2x + 3 \)

<table>
<thead>
<tr>
<th>( x )</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y )</td>
<td>1</td>
<td></td>
<td></td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

(b) Draw the graph of \( y = 2x + 3 \)

(Total for Question 33 is 4 marks)

TOTAL FOR SECTION B IS 40 MARKS
TOTAL FOR PAPER IS 60 MARKS
Mark Scheme for paper PLSC01

Section A

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Answer</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>C</td>
<td>1</td>
</tr>
<tr>
<td>Question Number</td>
<td>Working</td>
<td>Answer</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td>21(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21(b)</td>
<td></td>
<td>10, 13, 16</td>
</tr>
<tr>
<td>22(a)</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>22(b)</td>
<td></td>
<td>3.8</td>
</tr>
<tr>
<td>23(a)</td>
<td></td>
<td>Football</td>
</tr>
<tr>
<td>23(b)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>23(c)</td>
<td></td>
<td>Hockey</td>
</tr>
<tr>
<td>24(a)</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>24(b)</td>
<td>10 – 3.28 – 0.85</td>
<td>5.87 dollars or 587 cents</td>
</tr>
<tr>
<td>25(a)</td>
<td></td>
<td>kilometres</td>
</tr>
<tr>
<td>25(b)</td>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>25(c)</td>
<td></td>
<td>7 × 4</td>
</tr>
<tr>
<td>26(a)</td>
<td></td>
<td>(\frac{37}{100})</td>
</tr>
<tr>
<td>26(b)</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Question Number</td>
<td>Working</td>
<td>Answer</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td>27(a)</td>
<td></td>
<td>0.07, 0.6, 0.67, 0.76</td>
</tr>
<tr>
<td>27(b)</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>27(c)</td>
<td></td>
<td>( \frac{7}{100} )</td>
</tr>
<tr>
<td>28(a)</td>
<td></td>
<td>3, 6, 5, 4, 2</td>
</tr>
<tr>
<td>28(b)</td>
<td></td>
<td>Correct graph</td>
</tr>
<tr>
<td>29(a)</td>
<td></td>
<td>4 squares to the right and 3 squares up or ( \left( \frac{4}{3} \right) )</td>
</tr>
<tr>
<td>29(b)</td>
<td></td>
<td>(6,1) (6,5) (8,1)</td>
</tr>
<tr>
<td>30(a)</td>
<td></td>
<td>3f</td>
</tr>
<tr>
<td>30(b)</td>
<td></td>
<td>4a + 20</td>
</tr>
<tr>
<td>30(c)</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>30(d)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Question Number</td>
<td>Working</td>
<td>Answer</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>(pizza, fruit) (pizza, ice cream) (burger, fruit) (burger, ice cream) (steak pie, fruit) (steak pie, ice cream)</td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>33(a)</td>
<td></td>
<td>–1, 3, 5</td>
</tr>
<tr>
<td>33(b)</td>
<td></td>
<td>Correct graph</td>
</tr>
</tbody>
</table>