Rewarding Learning

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71

Candidate Num

General Certificate of Secondary Education
2011

Mathematics

Module N1 Paper 1
(Non-calculator)
Foundation Tier

[GMN11]

TUESDAY 31 MAY

9.15 am–10.00 am

GMN11

TIME

45 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Write your answers in the spaces provided in this question paper.
Answer **all twelve** questions.
Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
You **must not** use a calculator for this paper.

INFORMATION FOR CANDIDATES

The total mark for this paper is 44.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.
You should have a ruler, compasses, set-square and protractor.

<table>
<tr><th colspan="2">For Examiner's use only</th></tr>
<tr><th>Question Number</th><th>Marks</th></tr>
<tr><td>1</td><td></td></tr>
<tr><td>2</td><td></td></tr>
<tr><td>3</td><td></td></tr>
<tr><td>4</td><td></td></tr>
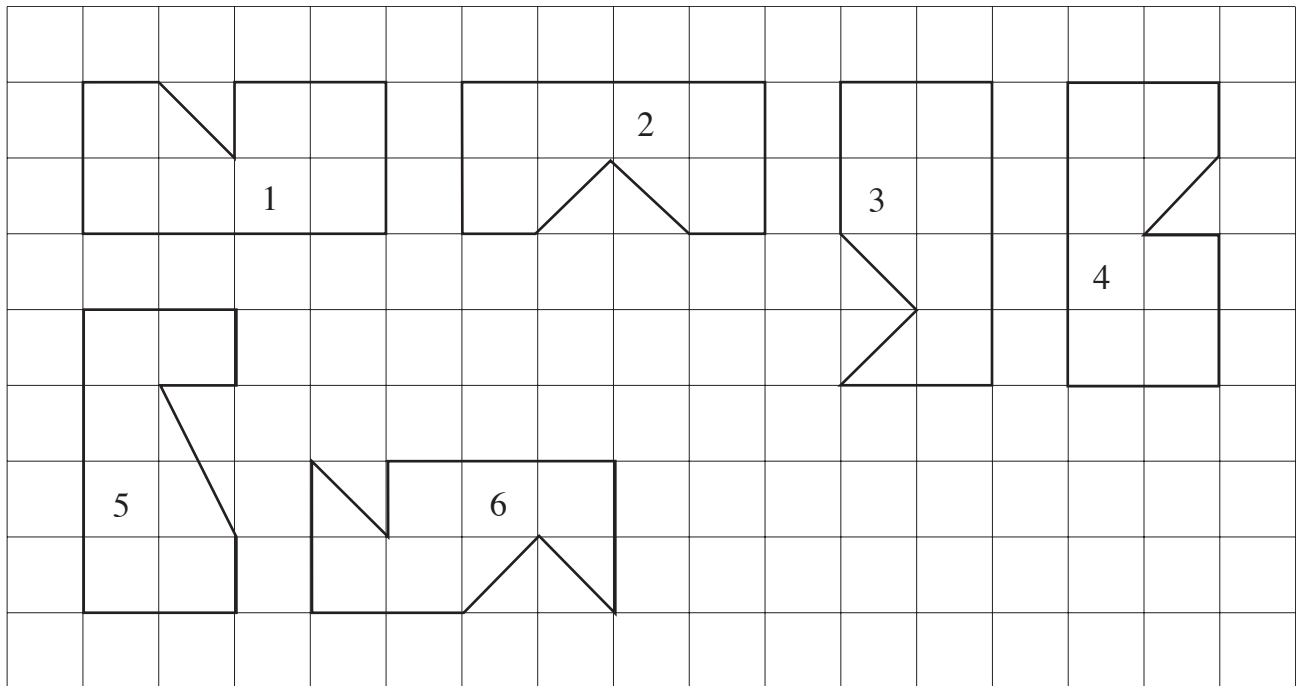<tr><td>5</td><td></td></tr>
<tr><td>6</td><td></td></tr>
<tr><td>7</td><td></td></tr>
<tr><td>8</td><td></td></tr>
<tr><td>9</td><td></td></tr>
<tr><td>10</td><td></td></tr>
<tr><td>11</td><td></td></tr>
<tr><td>12</td><td></td></tr>
<tr><td>Total Marks</td><td></td></tr>
</table>

6385.06**R**

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23	75	44
50	12	47
14	49	24

(a) From the numbers in the grid, write down

(i) two numbers with a total of 70,

Answer _____ , _____ [1]

(ii) two numbers with a difference of 30,

Answer _____ , _____ [1]

(iii) two factors of 48,

Answer _____ , _____ [1]

(iv) a square number.

Answer _____ [1]

(b) What is the biggest number you can get by multiplying any two numbers in the grid?

Answer _____ [2]

2 (a) Six snooker balls are spaced as shown.

GREEN   BROWN   YELLOW

●————————●   ●

●   ●
BLUE   PINK

●
BLACK

(i) On the diagram above, draw another straight line linking 2 balls to make an obtuse angle. [1]

(ii) On the diagram below, draw 2 straight lines linking balls to make an acute angle. [1]

GREEN   BROWN   YELLOW

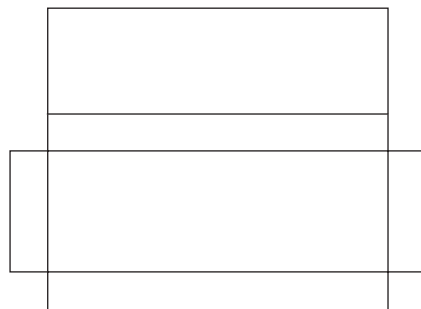●   ●   ●

●   ●
BLUE   PINK

●
BLACK

(b) Six shapes are shown.

Which two shapes are congruent?

Answer   Shape _____ and shape _____ are congruent.   [1]

(c)

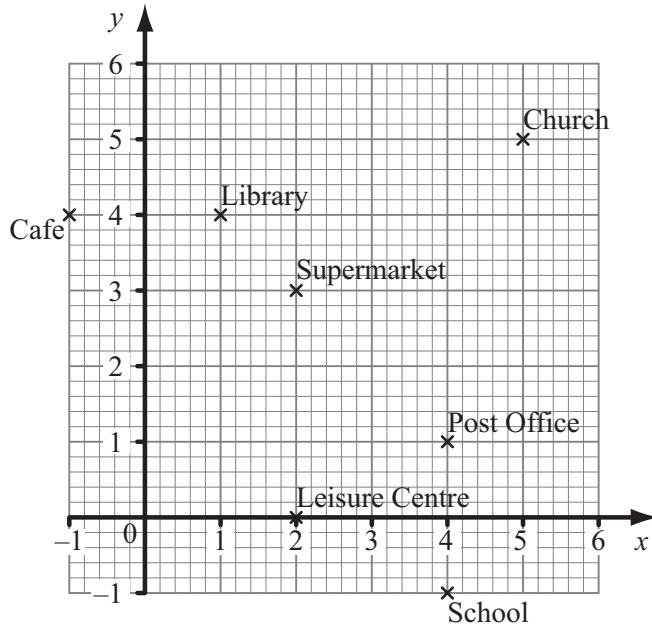This is a net of which solid?

Answer _____ [1]

3 80 cakes were sold in a bakery. The first four rows of the pictogram are shown below.

CAKE SALES

Fruit   ○ ○ ○ ○ ○

Iced Sponge   ○ ○ ○

Chocolate   ○ ○ ○ ○ ○

Lemon   ○ ○

Carrot

(a) 24 chocolate cakes were sold.

Complete the key: ○ = _____cakes [1]

(b) How many iced sponge cakes were sold?

Answer _____ [1]

(c) How many more fruit cakes than lemon cakes were sold?

Answer _____ [1]

(d) Complete the row of the pictogram for carrot cakes.   [2]

4

The grid shows the position of places in a town.

(a) Write down the co-ordinates of the Leisure Centre.

Answer (_____ , _____) [1]

(b) Complete the sentence:

The _____ has co-ordinates (4, −1).   [1]

[Turn over

5 (a) Calculate

   (i) $266 \div 7$

Answer _____ [1]

   (ii) $\dfrac{3}{4}$ of 48

Answer _____ [2]

   (iii) 0.6×0.4

Answer _____ [1]

   (iv) $\dfrac{5}{6} - \dfrac{1}{2}$

Answer _____ [2]

(b) Write down the value of $\sqrt{81}$

Answer _____ [1]

6 The pie chart shows how Angie spent £16 pocket money.

(a) How much money was spent on the cinema?

Answer £ _____ [1]

(b) Estimate how much money was spent on CDs.

Answer £ _____ [1]

(c) Measure the angle for drinks.

Answer _____° [1]

[Turn over

7 **(a)** Circle the correct answer.

The angle marked is

(i) opposite **(ii)** reflex

(iii) acute **(iv)** obtuse

[1]

(b) In the diagram PQR is a straight line.

Diagram not
drawn accurately

98°

26° x

P ——————— R

Q

Calculate the size of angle x

Answer $x =$ _____ ° [1]

(c) Calculate the size of angle y

y

175°

Diagram not
drawn accurately

Answer $y =$ _____ ° [1]

8 **(a)** $5a = 14$ Write down the value of $15a$.

Answer _____ [1]

(b) Solve $3t - 7 = 5$

Answer $t =$ _____ [2]

9 **(a)** Calculate 80% of 40

Answer _____ [2]

(b) Work out $7.3 - 3.86$

Answer _____ [1]

[Turn over

10 The stem and leaf diagram shows the weights of bags of onions.

$$
\begin{array}{c|l}
3 & 5\ 7\ 8\ 9 \\
4 & 2\ 5\ 6\ 8\ 9\ 9 \\
5 & 1\ 3\ 4
\end{array}
\qquad \text{Key } 3 \mid 5 = 3.5\,\text{kg}
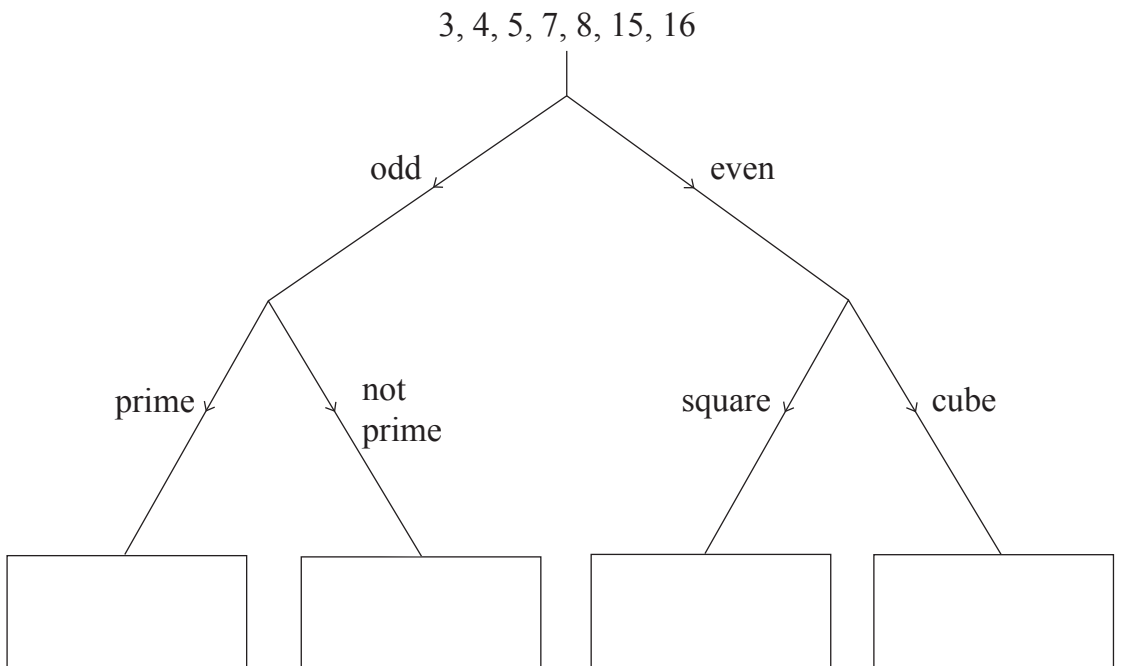$$

Write down

(a) the range,

Answer _____ kg [1]

(b) the median.

Answer _____ kg [1]

11 Using the decision tree diagram, sort these numbers into the correct boxes.

3, 4, 5, 7, 8, 15, 16

odd   even

prime   not   square   cube
          prime

[2]

12 An outline map of Tanua Island is shown.

The Atlas and the Barracuda are two hotels on this island.

×Atlas

N

× Barracuda

Scale: 1 cm to 5 km

(a) Use the diagram to calculate the actual distance of the Atlas from the Barracuda.

Answer _____ km [2]

(b) A new hotel, the Capri, is being built 25 km from the hotel Atlas on a bearing of 110°. Mark the correct position of this new hotel.   [2]

THIS IS THE END OF THE QUESTION PAPER

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