| Surname |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Centre Number |  |  |  |  |  | Other Names |  |
| Candidate Signature |  |  |  |  |  |  |  |
| Candate Number |  |  |  |  |  |  |  |

General Certificate of Secondary Education
November 2009

## MATHEMATICS (MODULAR) (SPECIFICATION B) <br> 43051/FB Module 1 Foundation Tier Section B

Friday 13 November 20092.05 pm to 2.35 pm


Time allowed for Section B: 30 minutes

## Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Answers written in margins will not be marked.
- Do all rough work in this book.
- You may not use your calculator in Section B. Your calculator must remain on the floor under your seat.
- When you have answered Section B you may work again on Section A but you may not use your calculator. It must remain on the floor under your seat.
- At the end of the examination tag Section A and Section B together with Section A on top.


## Information

- The maximum mark for Section B is 23 .
- The marks for questions are shown in brackets.
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer booklet.


## Advice

- In all calculations, show clearly how you work out your answer.


## Answer all questions in the spaces provided.

6 The bar chart shows the number of babies born in a hospital over four weeks.


6 (a) How many girls were born in week 1?
Answer $\qquad$ (1 mark)

6 (b) In which week were most babies born?
Answer $\qquad$ (1 mark)

6 (c) In which week were the same number of girls and boys born?
Answer $\qquad$ (1 mark)

6 (d) How many boys were born in week 4?
Answer . $\qquad$ (1 mark)

6 (e) How many boys were born, in total, at this hospital during these four weeks?
$\qquad$
Answer $\qquad$ (2 marks)

7 An eight-sided spinner is labelled with colours.


The arrows on the scale show the probability of certain events occurring for this spinner.


7 (a) Which letter shows the probability of the spinner landing on blue?
Answer
7 (b) Which letter shows the probability of the spinner landing on purple?
Answer
7 (c) Which letter shows the probability of the spinner landing on blue or yellow?
Answer (1 mark)

7 (d) P and Q are shown on this probability scale.


Describe an event, for this spinner, which is shown by
7 (d) (i) P $\qquad$
$\qquad$

7 (d) (ii) Q $\qquad$

8 Ehab asks 18 pupils to choose their favourite vegetable from a list. These are his results.

| peas | broccoli | peas | carrots | carrots | broccoli |
| :--- | :--- | :--- | :--- | :--- | :--- |
| peas | broccoli | sprouts | carrots | peas | carrots |
| carrots | peas | carrots | carrots | carrots | carrots |

Ehab decides to draw a pie chart to show these results. The table shows some of his work.

| Favourite <br> vegetable | Tally | Frequency | Angle <br> on pie chart |
| :---: | :---: | :---: | :---: |
| Broccoli (B) | 111 | 3 | $60^{\circ}$ |
| Peas (P) |  |  |  |
| Carrots (C) |  |  |  |
| Sprouts (S) |  |  |  |

8 (a) Complete the tally and frequency columns in the table.
(2 marks)
8 (b) (i) Complete the angle on pie chart column in the table.
$\qquad$
$\qquad$
$\qquad$
Turn over -
Turn over for the next question


9 The manager of a gym keeps a record of the number of people in the gym.
The data is logged at the beginning of each hour one morning.

| Time | Number of people <br> in the gym |
| :---: | :---: |
| 6 am | 4 |
| 7 am | 15 |
| 8 am | 32 |
| 9 am | 18 |
| 10 am | 20 |
| 11 am | 16 |

9 (a) 27 people entered the gym between 11 am and 12 noon. Nine people left the gym during this same time period.

How many people were in the gym at 12 noon?
$\qquad$
$\qquad$
Answer $\qquad$
9 (b) Six people left the gym between 7 am and 8 am .
How many people entered the gym between 7 am and 8 am ?
$\qquad$
$\qquad$

Answer $\qquad$

10 Here are three statements.
A The amount of rainfall and the number of sunbeds hired on a beach
B The number of people living in a house and the size of the garden
C The age of a child and the height of a child

Here are three scatter diagrams:


Match each scatter diagram to a statement.

$$
\begin{array}{ll}
\text { Statement A } & \text { Diagram .......................................... } \\
\text { Statement B } & \text { Diagram ........................................... } \\
\text { Statement C } & \text { Diagram ............................................ } \\
&
\end{array}
$$

## END OF QUESTIONS



