M2

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M2 (SECTION B)

B272B

Candidate Forename		Candidate Surname	

| Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

* Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
* Use black ink. Pencil may be used for graphs and diagrams only.
* Read each question carefully and make sure that you know what you have to do before starting your answer.
* Show your working. Marks may be given for a correct method even if the answer is incorrect.
* Answer **all** the questions.
* Do **not** write in the bar codes.
* Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your Candidate Number, Centre Number and question number(s).

INFORMATION FOR CANDIDATES

* The number of marks is given in brackets **[ ]** at the end of each question or part question.
* Section B starts with question 4.
* You are expected to use a calculator in Section B of this paper.
* The total number of marks for this Section is **25**.
* This document consists of **8** pages. Any blank pages are indicated.

Turn over

Formulae Sheet

Area of trapezium $= \frac{1}{2}(a+b)h$
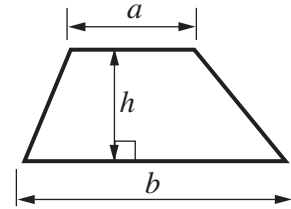
Volume of prism = (area of cross-section) × length
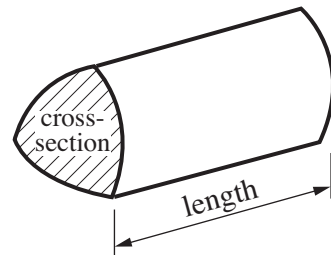
PLEASE DO NOT WRITE ON THIS PAGE

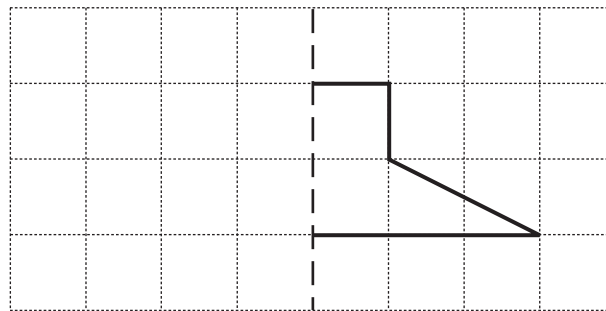**4** **(a)** Write down the fraction of each shape that has been shaded.
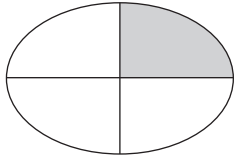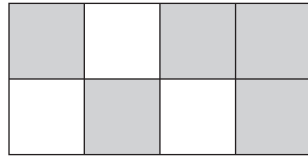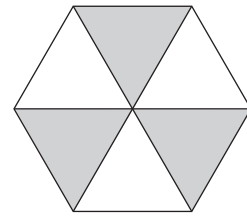
.... **[3]**

(b) Write $\frac{3}{4}$ as a decimal.

(b) .... **[1]**

5 Draw the reflection of this shape in the mirror line.

mirror
line

[2]

6 Here are the names of some solids.

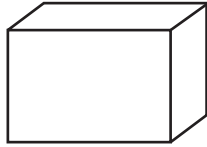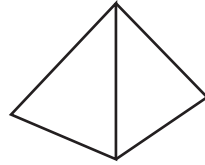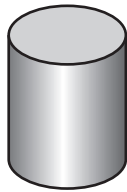|			
Cylinder	Cone	Cuboid	Cube
Sphere	Pyramid	Triangular-based prism	

Write the correct name under each solid.

....

....
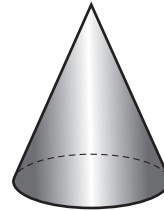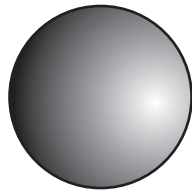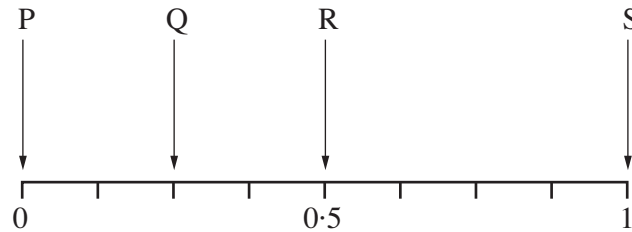
....

[3]

7 Pierre has 8 cartons of drink in his fridge.

- 2 orange
- 1 lemon
- 4 apple
- 1 cherry

He takes one of these drinks without looking.

Which arrow shows the probability that Pierre chooses

(a) apple,

(a) .... **[1]**

(b) blackcurrant,

(b) .... **[1]**

(c) orange?

(c) .... **[1]**

8

> ## Friendly Fisheries
>
> | | |
> |---|---|
> | Fish Supper | £3·80 |
> | Meat Pie | £1·80 |
> | Burger | £1·20 |
> | Sausage | £1·00 |

Claire has £20.

What is the greatest number of **Fish Suppers** she can buy?

.... **[2]**

9   This table shows the temperatures in six cities one day in March.

City	Temperature (°C)
Churchill	⁻7
Denver	8
Hong Kong	27
Murmansk	⁻4
Oslo	3
Yellowknife	⁻15

(a)   Which city was the coldest?

(a) .... **[1]**

(b)   What was the difference in temperature between the warmest city and the coldest city?
Show your working.

(b) ....°C **[2]**

10 This chart shows the distances in miles between six cities in Great Britain.

London					
210	Manchester				
213	34	Liverpool			
119	95	98	Birmingham		
117	218	256	162	Norwich	
151	197	200	118	269	Cardiff
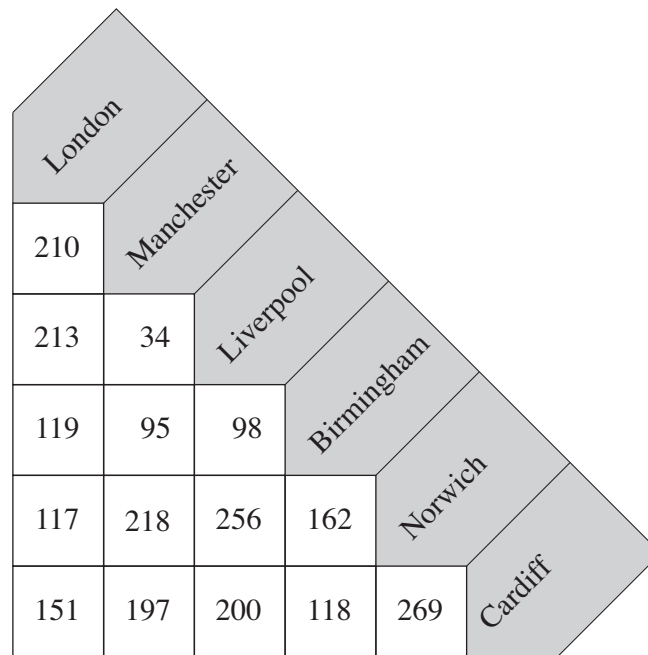
(a) How many miles is it between Manchester and Birmingham?

(a) .... **[1]**

(b) Andrew drives from London to Liverpool.
He then drives from Liverpool to Norwich.

How many miles does he drive altogether?

(b) .... **[2]**

(c) Julie drives from Cardiff to Birmingham.
She stops after driving 50% of the distance.

How many miles does she travel before she stops?

(c) .... **[2]**

TURN OVER FOR QUESTION 11

11 This word formula can be used to change between miles and kilometres.

Distance in kilometres = Distance in miles × 1·6

Use the formula to change

(a) 40 miles into kilometres,

(a) ....km **[1]**

(b) 72 kilometres into miles.

(b) ....miles **[2]**