Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						F	M	2	0	1	/	0	1	Signature	

Paper Reference(s)

FM201/01

Examiner's use only

Team Leader's use only

Edexcel Functional Skills

Mathematics

Level 2

Sample Assessment Material

Time: 1 hour 15 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, pen, HB pencil, eraser, calculator.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the tasks and questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
In this question paper there are 4 questions in Task 1, 1 question in Task 2, and 2 questions in Task 3.
The total mark for this paper is 48.
There are 16 pages in this question paper. Any blank pages are indicated.
Calculators may be used.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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Leave blank

TASK 1: COFFEE SHOP

Answer all questions in this task.

Write your answers in the spaces provided.

Where you see this sign you must show clearly how you get your answers as marks may be awarded for your working out.

Mabel runs a coffee shop.
Here is the menu.

Mabel's Coffee Shop		Open 11am to 7pm		
Drinks	**Price**		**Cakes**	**Price**
Pot of tea	£1.10		Carrot cake	£3.26
Cup of coffee	£1.20		Scone	£1.50
Mug of coffee	£1.40		Fairy cake	£2.50
Decaf coffee	£1.20		Fruit cake	£2.00
Cappucino coffee	£1.50		Chocolate cake	£3.50
Hot chocolate	£1.00		Muffin	£1.25

The bills for 4 different orders are shown below.

The bill for Table 4 is incomplete.

Bill number 01032
Table 1
1 customer

Pot of tea £1.10
Carrot cake .. £3.26

Total £4.36

Bill number 01352
Table 3
2 customers

Pot of tea ... £1.10
Cup of coffee £1.20

Total £2.30

Bill number 01573
Table 2
4 customers

Pot of tea £1.10
2 x Decaf coffee £2.40
Hot Chocolate £1.00
3 x Muffins £3.75
Choc cake £3.50

Total £11.75

Bill number 01304
Table 4
4 customers

Mug of coffee .... £
Decaf coffee .... £
Hot Chocolate .... £
Pot of tea .... £
4 x scones .... £

Total £

Leave blank

1. The customers at **Table 4** pay their bill with a £20 note.

How much **change** should Mabel give?

Change £ .....

Q1

(Total 4 marks)

2. For Mabel to make a profit she needs every customer to pay an average of £2.50.

Look at the bills for Tables **1**, **2** and **3**.

Work out the Total **mean** (average) amount paid **per customer**.

Use the box below to show clearly how you get your answer.

Mean amount £ .....

Q2

(Total 4 marks)

Leave blank

3. Mabel wants to work out an estimate of the total amount of money that she will take in one day.
She adds up all the totals of all the bills for the first 15 minutes after opening.
She uses this information to estimate the amount of money taken in one day.
The coffee shop is open from 11am to 7pm every day.

a) Give **two** reasons why this is **not** a good way of estimating the total amount of money that Mabel will take in one day.

1 .....

.....

2 .....

.....

(2)

b) What should Mabel do to work out a more accurate estimate of the total amount of money she will take in that day?

.....

.....

.....

.....

.....

.....

.....

.....

(2)

(Total 4 marks)

Q3

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TURN OVER FOR QUESTION 4

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4. Five assistants work in the coffee shop every day.
The table below shows the number of hours worked by each of four of the assistants each day.

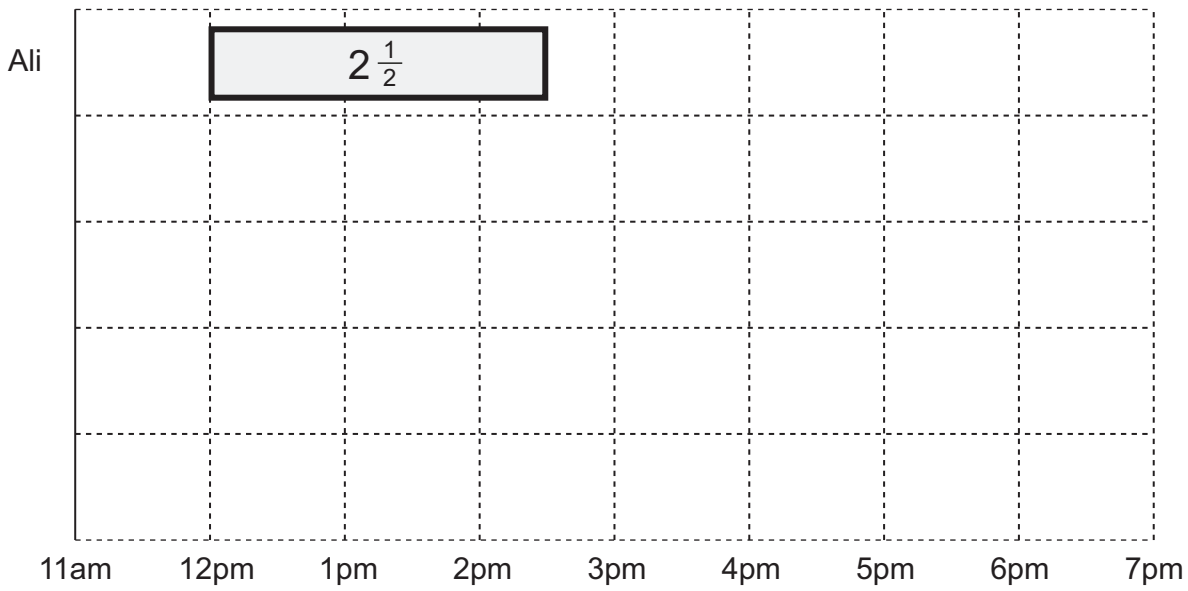
Name	Number of hours worked each day
Ali	$4\frac{1}{2}$
David	$6\frac{1}{2}$
Chris	4
Sally	$5\frac{1}{2}$
Ben	

Mabel needs to decide how many hours Ben should work in the coffee shop each day.

She wants to draw a working schedule diagram to show the times when each person works.

Some of the hours that Ali works are shown by the shaded bar of the incomplete working schedule diagram.

Working schedule diagram



Mabel must make sure that:

- there are **at least** 3 assistants working in the coffee shop at any one time
- each assistant gets at least one break
- breaks are exactly $\frac{1}{2}$ hour
- assistants cannot work more than 3 hours without taking a break

Leave blank

a) Complete Mabel's diagram using all the information.

Show the hours worked by **all** the assistants in the coffee shop.

Decide how many hours Ben should work each day.

You may use the box below to plan your answer.

(6)

Leave blank

The coffee shop is open from 11am to 7 pm **every** day of the week. The five assistants work in the shop every day.
Mabel pays £6.20 per hour.

b) Calculate the total **weekly** wage bill Mabel must pay her staff.

Total weekly wage bill £ .....

(4)

Q4

(Total 10 marks)

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TURN OVER FOR QUESTION 5

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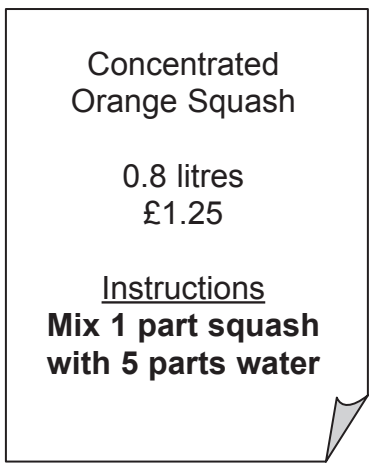
TASK 2: CHILDREN'S PARTY

Answer all questions in this task.

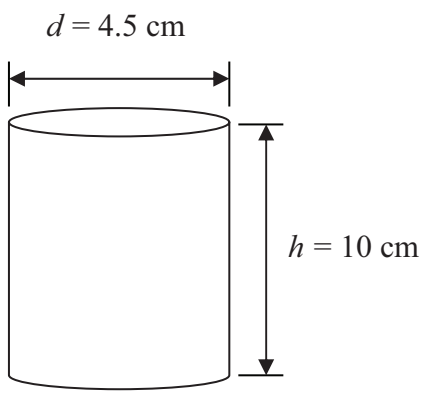
Write your answers in the spaces provided.

Where you see this sign you must show clearly how you get your answers as marks may be awarded for your working out.

5. You are planning a party for 30 children.
You buy some concentrated orange squash and some plastic cups.



Bottle label



Plastic cup

a) Each plastic cup will have 150 m*l* of drink in it.
150 m*l* = 150 cm^3

Use the information about the size of the plastic cup to check that this plastic cup can hold 150 m*l* of drink by calculating its volume.

The volume can be calculated using the formula.

$$\text{Volume} = \frac{\pi \times h \times d^2}{4}$$

(2)

Leave blank

Each of the 30 children at the party will have a maximum of **three** drinks of orange squash.

- Each plastic cup is to be filled with 150 m*l* of drink
- The squash needs to be diluted as shown on the bottle label
- A bottle of concentrated orange squash contains 0.8 litres of squash
- A bottle of concentrated orange squash costs £1.25

b) How many bottles of concentrated orange squash do you need for the party **and** how much will they cost in total?

Number of bottles .....

Total cost £ .....

(8)

Q5

(Total 10 marks)

Leave blank

TASK 3: GARDEN

Answer all questions in this task.

Write your answers in the spaces provided.

Where you see this sign you must show clearly how you get your answers as marks may be awarded for your working out.

6. The same barbeque set is sold in three different shops.

Here are the price labels shown on each barbeque set.

Shop A

£680.00 (inc VAT)

Get $\frac{1}{4}$ off when you buy this barbeque set.

Shop B

£640.00 (inc VAT)

Now with 20% discount on this price.

Shop C

£450.00

Add 15% VAT to this price.

Leave blank

Work out the new prices.

Which shop is selling the barbeque set at the lowest price?

Which shop is selling the barbeque set at the highest price?

Shop selling the barbeque set at the **lowest** price .....

Shop selling the barbeque set at the **highest** price .....

Q6

(Total 8 marks)

Leave blank

7. Peter has a garden.
The size and shape of his garden is shown below.

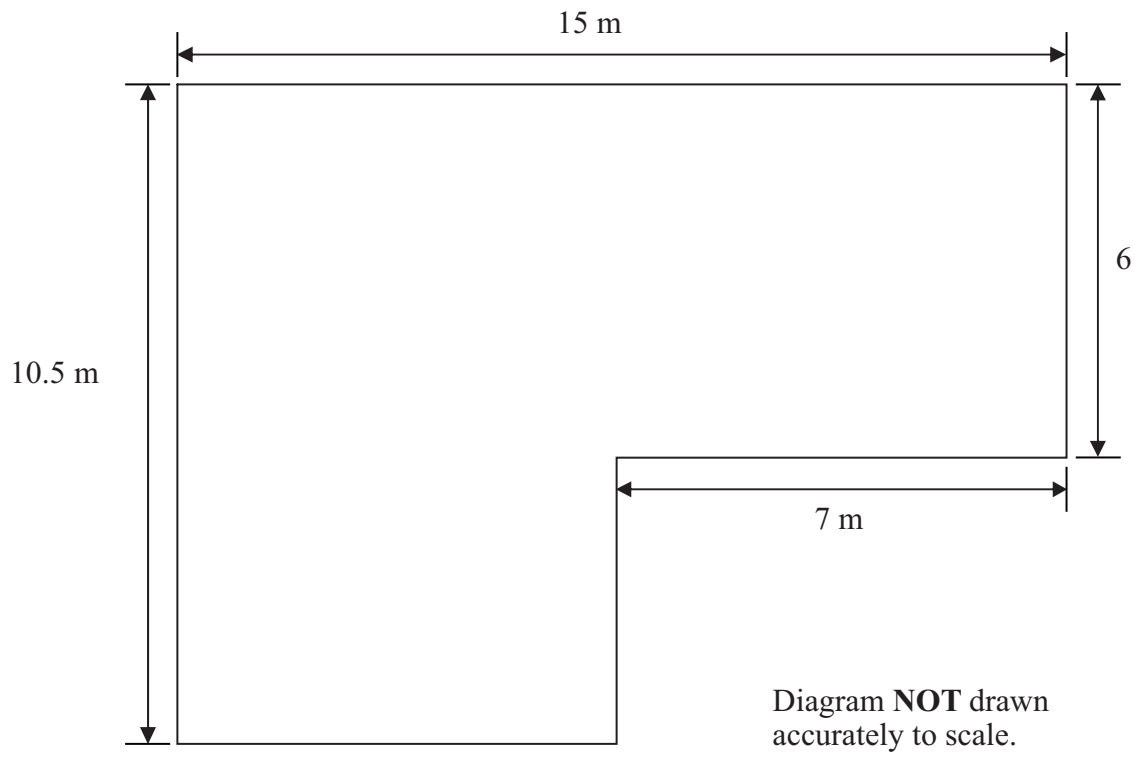
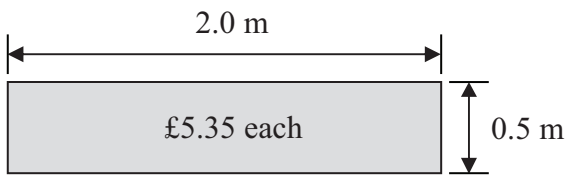


Diagram **NOT** drawn accurately to scale.

Peter wants to cover all of his garden with new grass.
The grass can be bought as long strips.



Strip of grass

Peter does **not** want to buy more strips than he has to.

The strips that he buys can be cut to make shorter strips.

Leave blank

Calculate the lowest **total** cost of the grass for Peter's garden.

Use the box below to show clearly how you get your answer.
You may find it helpful to draw on the diagram of the garden.

Total cost £ .....

Q7

(Total 8 marks)

TOTAL FOR PAPER: 48 MARKS

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