

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

Paper Reference(s)

**FM101/01**

# Edexcel Functional Skills Mathematics

Level 1

Sample Assessment Material

Time: 1 hour 15 minutes



Examiner's use only

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Team Leader's use only

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**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 5 questions in Task 1, 2 questions in Task 2, and 2 questions in Task 3. The total mark for this paper is 48. There are 20 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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### 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.

1. When a customer pays the bill it is given a bill number. Each bill has a different number.

The bills for 4 different orders are shown below.

Bill number 01032	
1 customer	
Pot of tea ....	£1.10
Total	£1.10

Bill number 01573	
4 customers	
Pot of tea .....	£1.10
2 x Decaf coffee ..	£2.40
Hot Chocolate ....	£1.00
Total	£4.50

Bill number 01304	
4 customers	
Mug of coffee ....	£1.40
Decaf coffee ....	£1.20
Hot Chocolate ....	£1.00
Pot of tea ....	£1.10
Total	£4.70

Bill number 01352	
2 customers	
Pot of tea ...	£1.10
Cup of coffee	£1.20
Total	£2.30

Mabel wants to collect some information about the money taken in the coffee shop.

The first task she carries out is to put the bill numbers in order.

- (a) Write the bill numbers in order.

Start with the smallest number, which is given for you.

01032 .....
-------------

(1)



Leave  
blank

Next she wants some information about the totals of the bills.

(b) What is the **range** of the totals on the bills?



£ .....

(2)

(c) What is the **mean** total of these four bills?



£ .....

(3)

(Total 6 marks)

Q1

3

Turn over



H 3 6 6 3 3 A 0 3 2 0

Leave blank

2. Here is the drinks menu.

<b>Mabel's Coffee Shop</b>	
<b>Drinks</b>	<b>Price</b>
Pot of tea	£1.10
Cup of coffee	£1.20
Mug of coffee	£1.40
Decaffeinated coffee	£1.20
Cappucino coffee	£1.50
Hot chocolate	£1.00



Jenna and her three friends buy some drinks.  
Here is her bill.

Bill number 0018	
4 customers	
1 Pot of tea .....	£1.10
1 Cappuccino .....	£1.50
1 Hot Chocolate .....	£1.00
1 cup of coffee .....	£1.20
Total	£xxx

Mabel cannot read the total on Jenna's bill.

(a) What is the total of Jenna's bill?

Total £ .....
---------------

(1)

Jenna pays the bill with a £10 note.

(b) How much change should Jenna get?



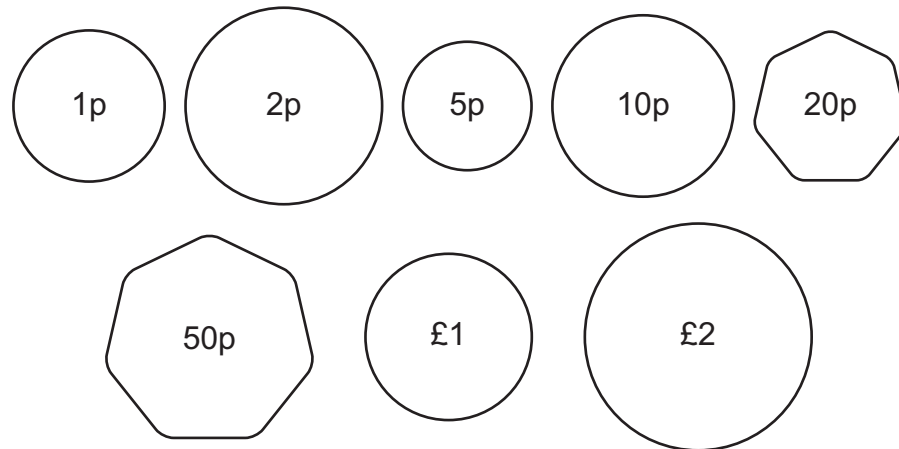
Change £ .....
----------------

(2)



Leave  
blank

The till contains 10 each of the following coins.



(c) How could Mabel make up the change for Jenna?

She must use at least 3 different types of coins.



A large empty rectangular box for writing the answer to the question.

(3)

Q2

(Total 6 marks)



3. Four people work as assistants in the coffee shop each day.

The number of hours worked each day by the four assistants is shown in the table below.

Name	Number of hours worked each day
Ali	$4\frac{1}{2}$
David	7
Chris	4
Sally	$5\frac{1}{2}$

Mabel wants to employ a fifth assistant called Ben.

The rate of pay per hour is £6.00

The total wage for a day is worked out using this formula.

$$\text{total wage} = \text{number of hours worked} \times \text{rate of pay per hour}$$

The budget for the wages for all 5 assistants is £162

(a) Work out the number of hours Ben will work each day.

To do this you should:

- Work out the total wage bill for Ali, David, Chris and Sally
- Work out how much of the total wage bill is left
- Work out how many hours Ben can work



Number of hours .....

(3)



Mabel wants to show the times when the five assistants work in a working schedule diagram.

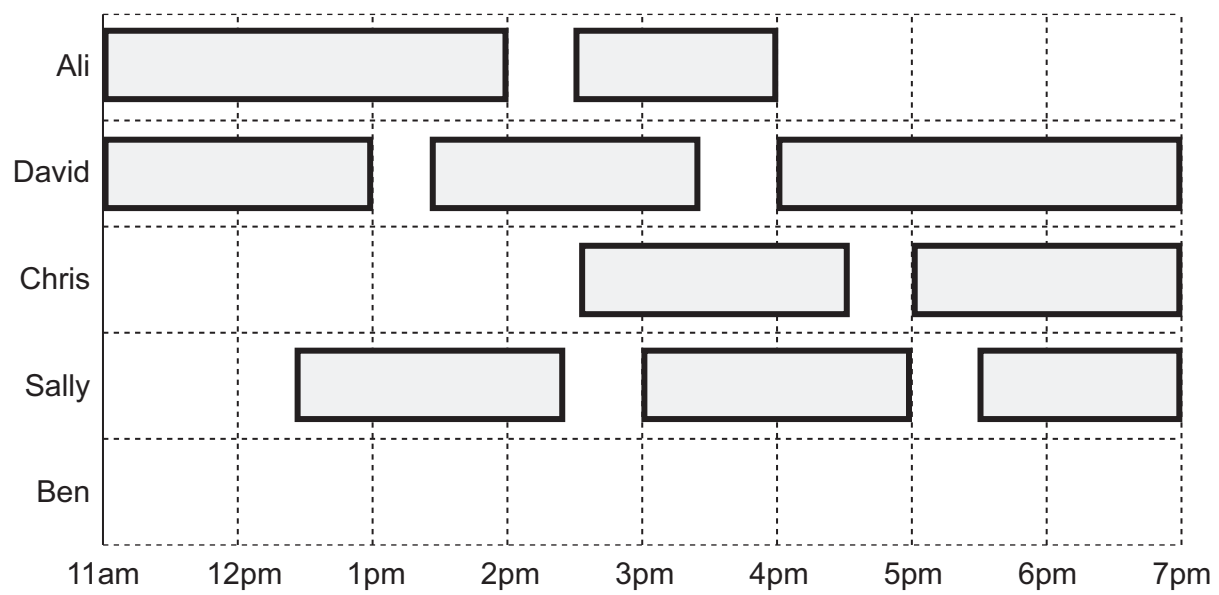
Below is a working schedule diagram for the coffee shop. Mabel needs to fit the hours Ben works into the diagram.

(b) Fit the times Ben works into the working schedule diagram so that:

- There are **at least 3** assistants working in the shop at any one time.
- A break is taken after a maximum of 3 hours working
- Breaks must be **exactly**  $\frac{1}{2}$  hour

You may use the box below to plan your answer.

**Working schedule diagram**



(3)

Q3

(Total 6 marks)



Leave  
blank

4. The coffee shop is open from 11am to 7pm.

Mabel wants to know how many adults and how many children come into the shop, each hour the shop is open.

Between 11am and 12pm there are 7 adults and 5 children.

Design a data collection sheet that she could use to collect this information.

Complete your data sheet showing the number of adults and children between 11am and 12pm.



--

Q4

(Total 4 marks)





Leave  
blank

5. 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.

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 .....

.....

Q5

(Total 2 marks)



**TASK 2: CHILDREN'S PARTY**

**Answer all questions in this task.**

**Write your answers in the spaces provided.**

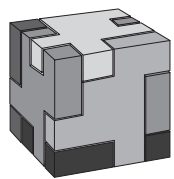


**Where you see this sign you must show clearly how you get your answers as marks may be awarded for your working out.**

6. You are planning a party for 30 children.

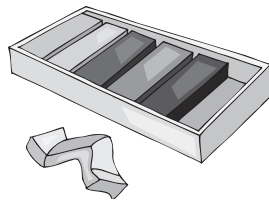
Every child will get a gift at the party.

**Gift A  
£1.25**



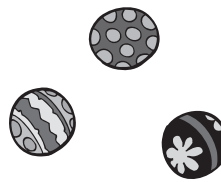
**Puzzle Cube**

**Gift B  
£1.50**



**Modelling Clay**

**Gift C  
£1.75**



**Juggling Balls**

The amount to be spent on gifts is £50

There are 30 children at the party.

$\frac{3}{5}$  of these children are girls.

- (a) What percentage of these children are girls?



..... %

**(2)**



Leave  
blank

(b) Complete the answer table below to show how many of each type of gift should be bought.

You must:

- buy 30 gifts in total
- spend no more than £50
- buy at least 5 of each type of gift

If you have any change left give the amount.



**Answer table**

Type of Gift	Cost	Number	Total cost
Gift A	£1.25		
Gift B	£1.50		
Gift C	£1.75		
<b>Total cost of gifts</b>			
<b>Change from £50</b>			

(4)

(Total 6 marks)

Q6

11

Turn over



H 3 6 6 3 3 A 0 1 1 2 0

Leave blank

7. Each child will be given a piece of cake in a gift box.

Here is a sketch of the gift box.

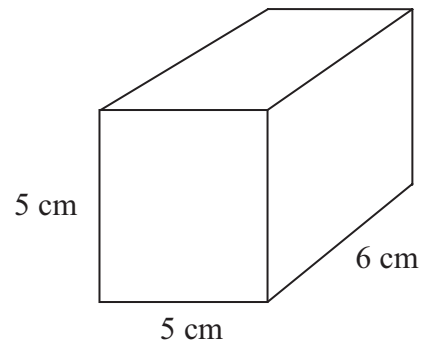


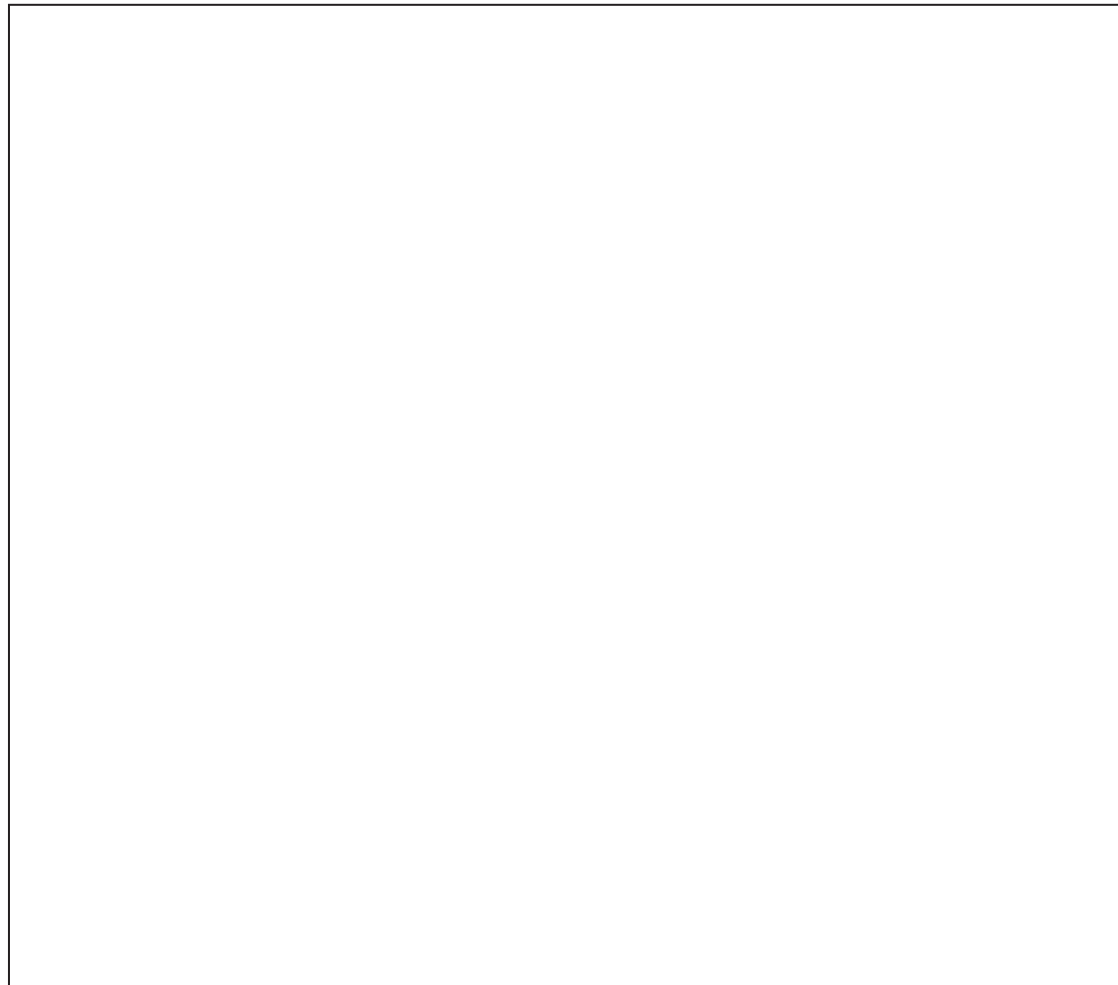
Diagram **NOT** accurately drawn

A net of the box is drawn on card so it can be cut out and folded to make the box.

In the space opposite, draw an accurate net for the box.

Find the length and width of the smallest rectangle of card needed for the net.

You may use the box below to plan your answer.





Leave  
blank


Smallest **length** .....

Smallest **width** .....

**(Total 6 marks)**

Q7

--



H 3 6 6 3 3 A 0 1 3 2 0

### TASK 3: COLLEGE

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.

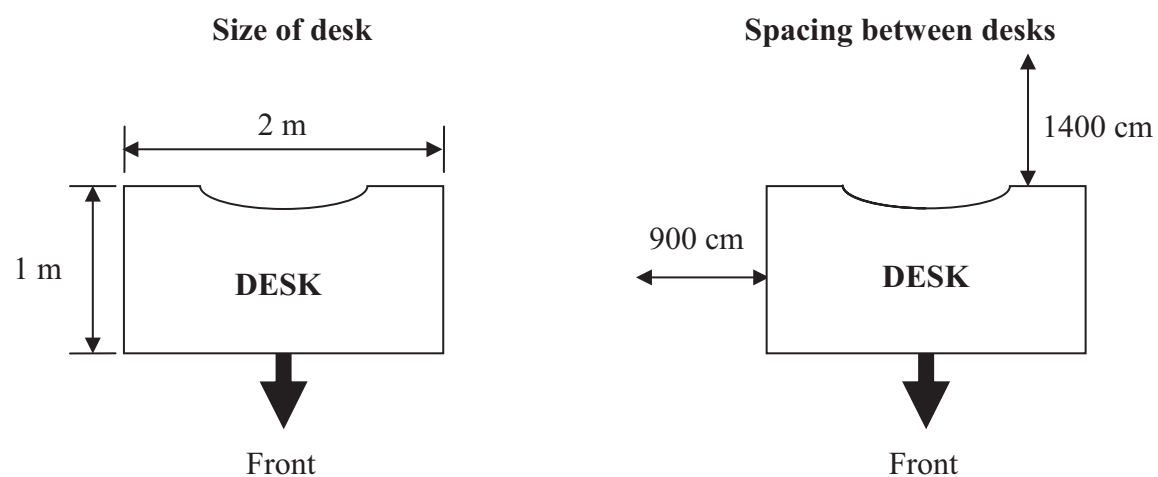
8. Dale works as a caretaker in a college.

The desks in each room must be arranged so that wheelchair users can move between the desks and sit at a desk.

Desk information

- the gaps at the sides of the desks should be at least 900 mm
- the gap needed to get a wheelchair behind a desk is 1400 mm
- desks must face the teacher's desk
- all desks have a length of 2 m and a width of 1 m.

#### Diagram of one desk showing details



Diagrams **NOT** accurately drawn to scale

In the diagram of the classroom opposite, sketch a layout to show how **six** desks could be arranged to allow wheelchair access.

You do **not** need to draw an accurate scaled diagram.

All desks must fit in the dimensions of the classroom.

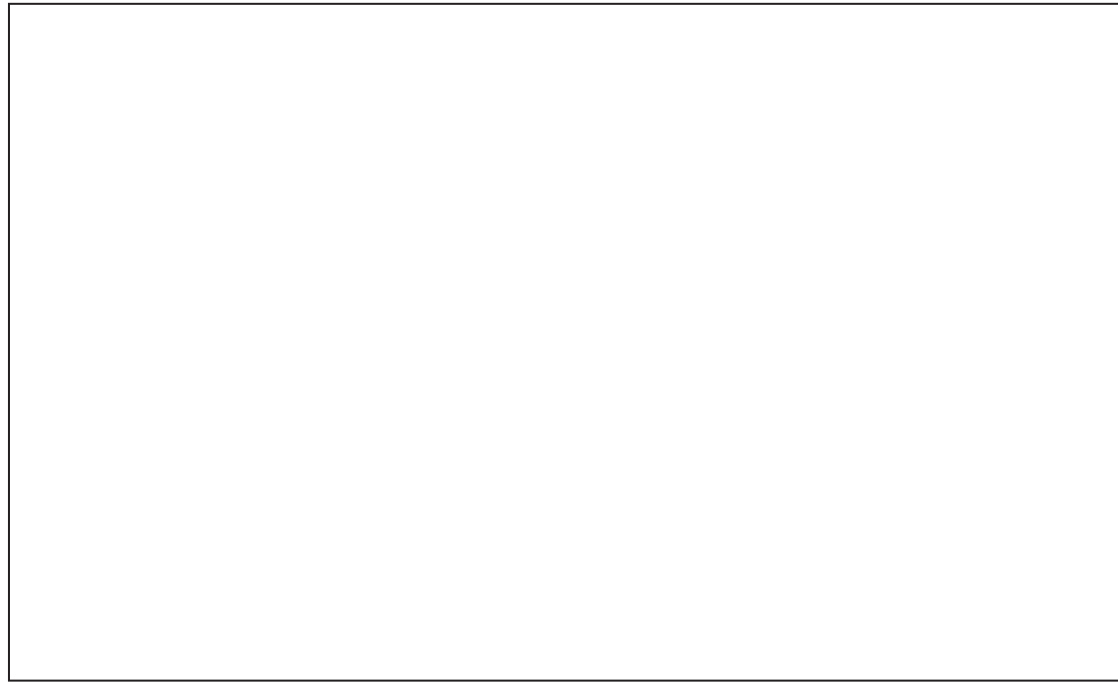
Show your spacings on the diagram.

The teacher's desk has been drawn for you.

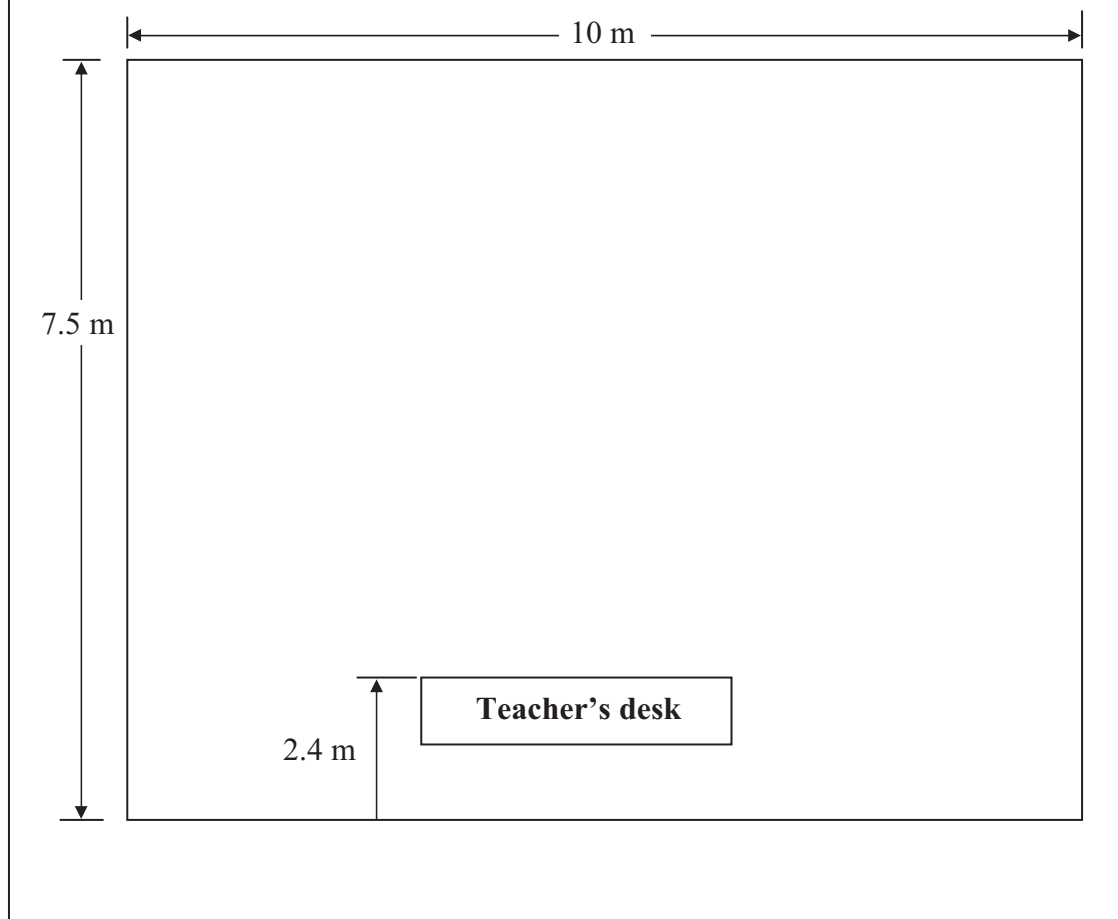


Leave blank

You may use the box below to plan your answer.



Answer box.



Q8

(Total 6 marks)



Leave blank

9. The diagram shows the dimensions of a storeroom in the college.

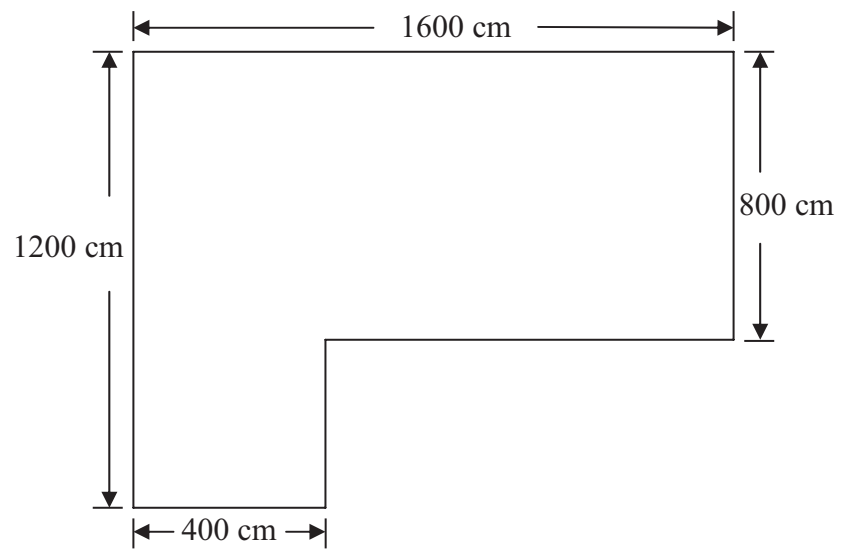


Diagram **NOT** accurately drawn

Dale wants to cover the surface of the storeroom floor with floor tiles.

He uses square floor tiles with a side of length 40 cm.

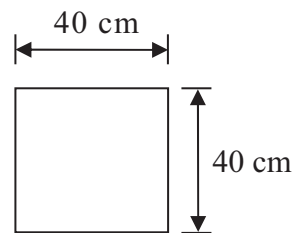


Diagram **NOT** accurately drawn





Leave  
blank

How many tiles are needed to cover the floor of the storeroom completely?  
Whole floor tiles must be used (they cannot be cut) and the tiles cannot overlap.



Blank area for drawing or calculation.

Q9

(Total 6 marks)

**TOTAL FOR PAPER: 48 MARKS**

**END**



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H 3 6 6 3 3 A 0 1 9 2 0

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