

Centre No.						Paper Reference	Surname	Initial(s)
Candidate No.						FM101/01	Signature	

Paper Reference(s)

FM101/01

Edexcel Functional Skills Mathematics

Level 1

Monday 9 June 2008 – Morning

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 6 questions in Task 1, 6 questions in Task 2, and 4 questions in Task 3. The total mark for this paper is 60. 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: TENNIS

Answer all six questions in this task.

Write your answers in the spaces provided.

You must write down all stages in your working.

1. Here are some statistics from the 2007 Wimbledon Tennis Championships.
An ace in tennis is where a player serves and scores with one ball.

For some of the male players, the table shows the number of matches played by each of them, and the number of aces served by each of them.

Male Players	Matches played	Aces served
R Federer	7	85
A Roddick	5	84
T Berdych	5	79
W Arthurs	3	65
G Monfils	3	64
N Djokovic	6	61
J Ferrero	5	60
I Ljubicic	3	55
R Soderling	3	51
J Tipsarevic	4	50

- (a) Which male player played exactly 6 matches?

.....
(1)

- (b) How many male players played exactly 3 matches?

.....
(1)

- (c) How many more aces were served by T Berdych than by W Arthurs?

.....
(1)



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The following table shows the same information for some female players at the 2007 Wimbledon Tennis Championships.

Female Players	Matches played	Aces served
M Krajicek	5	45
S Williams	5	41
A Mauresmo	4	36
A Ivanovic	6	31
V Williams	7	29
D Hantuchova	4	26
N Vaidisova	5	25
S Stosur	2	20
S Kuznetsova	5	20
P Schnyder	4	19

(d) Which **male** player served 3 times as many aces as the female player S Stosur?

.....
(1)

(e) How do the number of aces served by male players compare with the number of aces served by female players?

.....
.....
(1)

(Total 5 marks)

Q1

2. The attendance for the first week of the 2006 Championships was 467 191.

(a) What is the number 467 191 rounded to the nearest thousand?

.....
(1)

The attendance for the first week of the 2005 Championships was 447 126.

(b) What was the increase in the attendance from 2005 to 2006?

.....
(1)

(Total 2 marks)

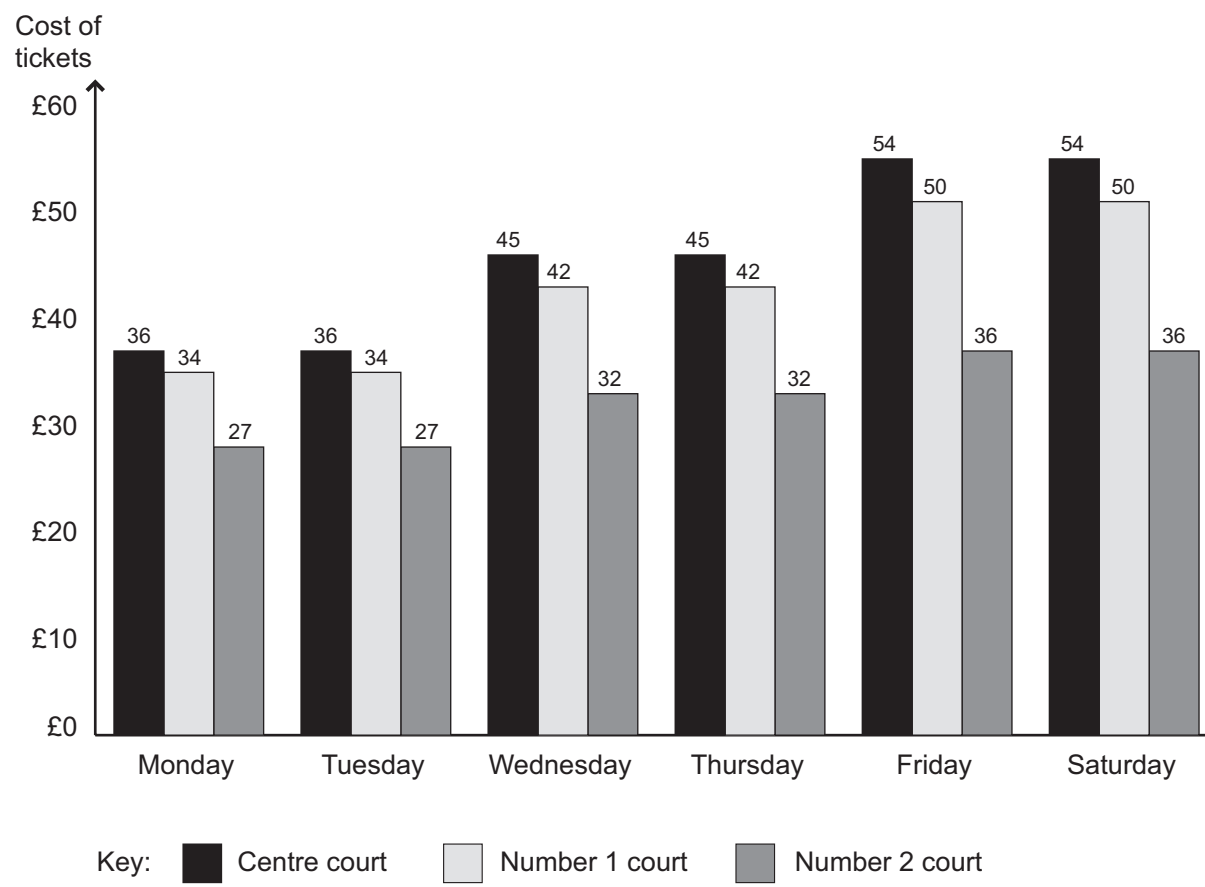
Q2



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3. At Wimbledon the top three tennis courts are the Centre court, the Number 1 court and the Number 2 court.

The chart shows the costs of tickets in the first week of the Championships in 2007 for these three tennis courts.



- (a) How much was the cost of a ticket for the Number 1 court on the Wednesday?

£
(1)

- (b) How much was the cost of a ticket for Centre court on the Friday?

£
(1)



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blank

A Number 2 court ticket was bought for the Monday.
A Number 2 court ticket was bought for the Saturday.

(c) What was the difference in the costs?

£
(1)

Martin bought some tickets for the Centre court.

He bought 2 tickets for the Tuesday
2 tickets for the Wednesday.

He had £200 to spend.

(d) How much does he have left after paying for the tickets?

£
(2)

Q3

(Total 5 marks)

5

Turn over



Leave
blank

4. The table shows the prize money won by the two finalists in the men's finals of 2006 and 2007.

	2006	2007
Winning finalist	£655 000	£700 000
Losing finalist	£327 000	£327 500

- (a) What was the total prize money won by the two finalists in 2007?

£
(1)

- (b) How much more prize money was given to the two finalists in 2007 than in 2006?

£
(1)

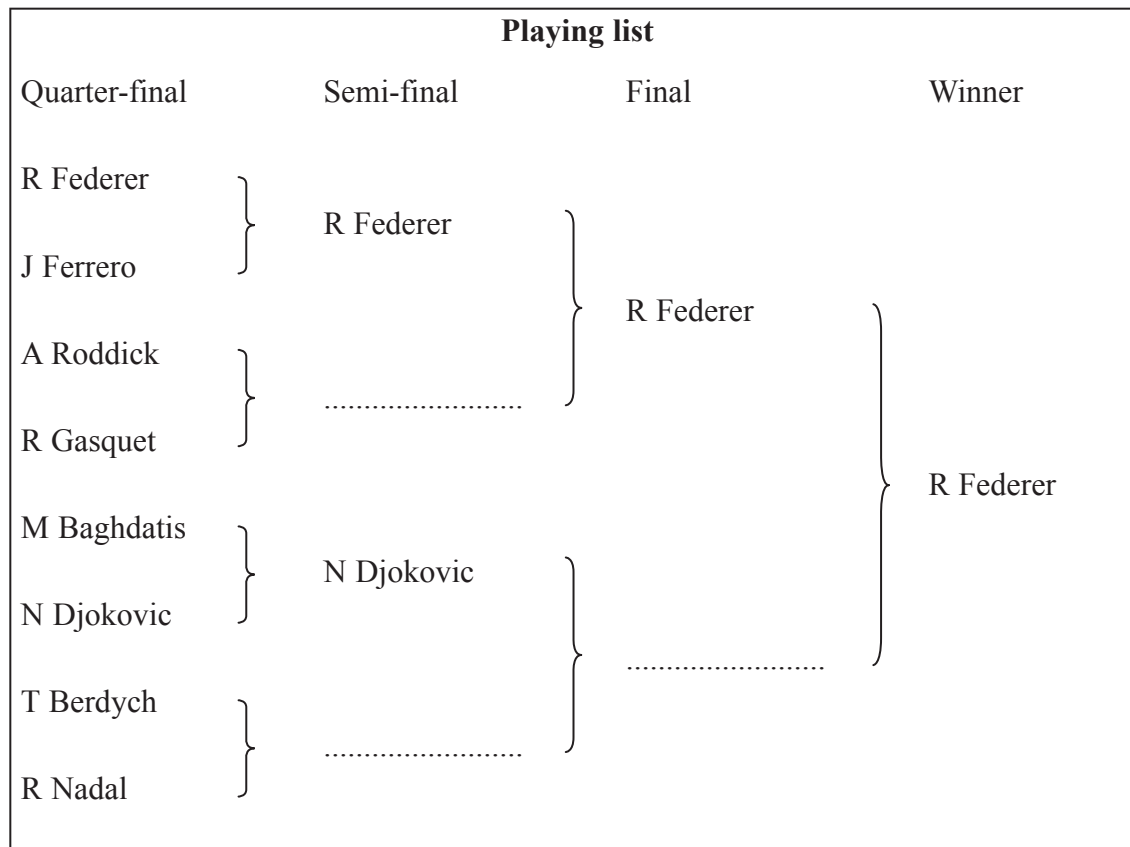
(Total 2 marks)

Q4



5. The diagram shows the playing list for the last 3 rounds of the men's singles competition.

The four winners of each match in the quarter finals go into the semi-finals.
 The two winners of each match in the semi-finals go into the final.



(a) How many matches are there in the last 3 rounds of the Championships?

(1)

In the final R Federer played R Nadal and the winner was R Federer.
 R Gasquet and N Djokovic were also in the semi-finals.
 (b) Complete the playing list.
(1)

“Any player in the quarter-final has a 1 in 8 chance of winning the competition.”
 (c) This statement is wrong.
 Explain why.

(1)

(Total 3 marks)

Q5



Leave blank

6. Fruit cordial is mixed with water to make a drink for the players.

The instruction for making a drink is

Mix 1 part cordial with 5 parts water

There are 50 ml of cordial in a bottle.



(a) How much water needs to be mixed with this cordial to make a drink?

..... ml
(1)

A glass holds 600 ml of drink.

(b) How much cordial and how much water are needed to make a drink to fill this glass?



Cordial ml

Water ml
(2)

(Total 3 marks)

Q6



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TASK 2: OFFICES

Answer all six questions in this task.

Write your answers in the spaces provided.

You must write down all stages in your working.

7. Many companies pay rent for office space.
The table below shows the cost of the rents, in £ per m² per week, for some offices in different cities.

City	Rent per m ²
Plymouth	£97
London West End	£807
Cardiff	£199
Swansea	£118
Leeds	£151
Manchester	£210

- (a) In which city is the rent the greatest?

.....
(1)

- (b) What is the range of the costs?

£
(2)

The office in Manchester has an area of 100 m².

- (c) What is the total cost of the rent for this office in Manchester for a week?

£
(1)



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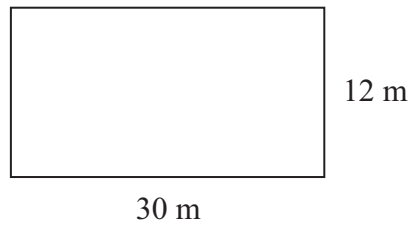


Diagram **NOT**
accurately drawn

This is the plan of the office in Plymouth.

(d) What is the total cost of the rent for this office in Plymouth for a week?

£
(2)

(Total 6 marks)

Q7

8. The British Council for Offices says that every office worker should have a minimum working space of 12 m^2 .

An office is needed for 8 office workers.

(a) What is the least total working space needed for these 8 workers?

..... m^2
(1)

Another office has a total of 345 m^2 of working space.

(b) How many office workers is there space for in this office?

.....
(2)

(Total 3 marks)

Q8

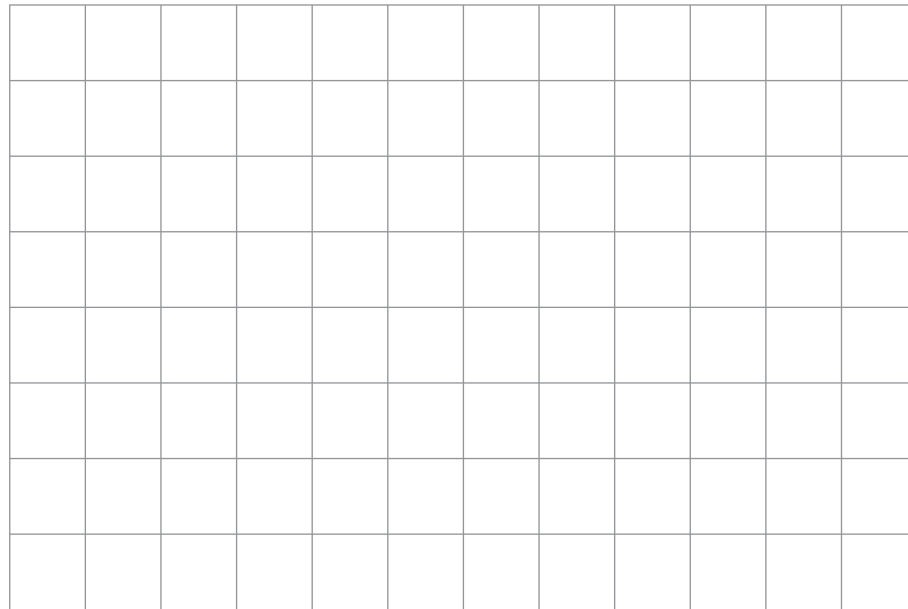


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9. A desk has a length of 160 cm.
It has a width of 80 cm.

On the centimetre grid, 1 cm represents 20 cm.

On the grid, draw to the correct scale a rectangle to represent the desk.



Q9

(Total 2 marks)

10. In an office, $\frac{1}{5}$ of the workers are male.

- (a) What percentage of the workers are male?

..... %
(1)

The table shows the times that one person was at work during one particular week.

	Mon	Tue	Wed	Thu	Fri
Starting time	09 00	08 55	08 15	09 10	09 15
Finishing time	17 05	16 10	16 00	17 00	16 30

- (b) For how long was this person at work on Wednesday?
Give your answer in hours and minutes.

..... hours minutes
(1)

Q10

(Total 2 marks)



Leave blank

11. Office regulations say the gap between the desks should be 900 mm to allow for wheelchair users.

(a) Change 900 mm to metres.

..... metres
(1)

A desk has a length of 2 m and a width of 1 m.

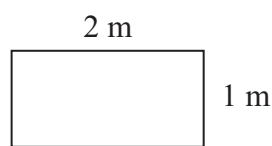


Diagram NOT accurately drawn

Six of these desks are arranged as shown in the diagram below.
The gap between each desk is 900 mm.

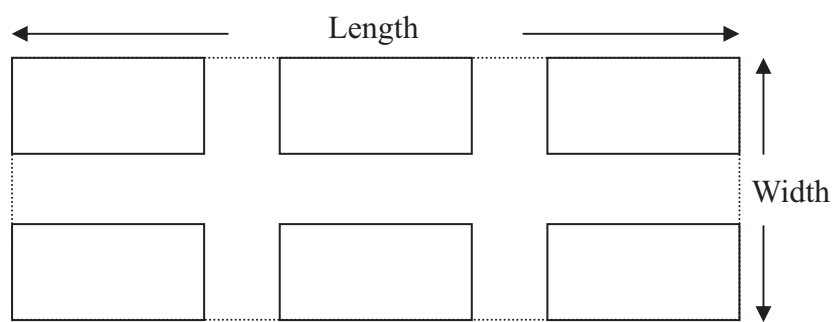


Diagram NOT accurately drawn

(b) What is the total length and the total width of the office space needed for these desks?

Length m

Width m

(3)

Q11

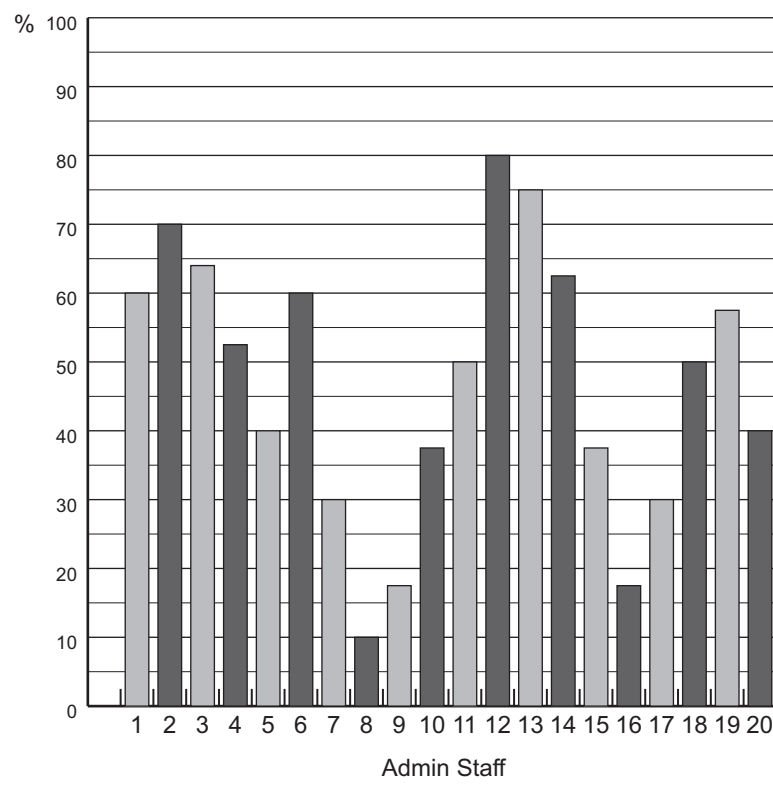
(Total 4 marks)



12. A company has admin staff and field staff. Admin staff spend all their working day in the company offices. Field staff spend some of their working day out of the offices.

For each member of staff, the percentage of their working day spent at their desk is recorded.

The bar chart shows this information for the admin staff.



(a) What is the greatest percentage time recorded?

..... %
(1)

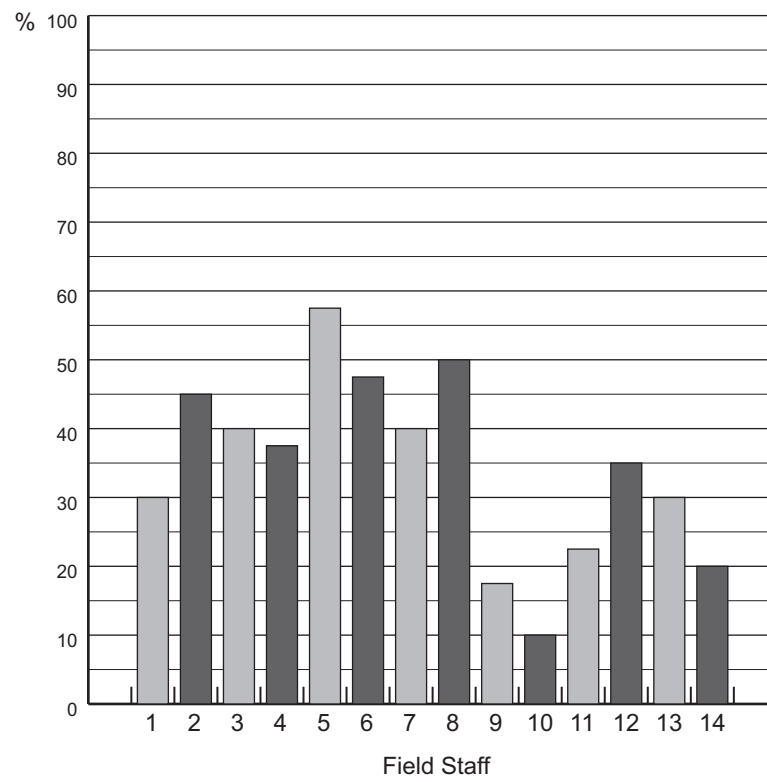
(b) What is the least percentage time recorded?

..... %
(1)



Leave blank

This bar chart shows the information recorded for the field staff.



(c) Compare the working days of admin staff and of field staff as shown by the two bar charts. Write down one conclusion.

.....
.....

(1)

Q12

(Total 3 marks)



Leave
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TASK 3: COFFEE SHOP

Answer all four questions in this task.

Write your answers in the spaces provided.

You must write down all stages in your working.

13. Mabel owns a coffee shop.

When a customer pays a bill, it is recorded with a bill number.
Mabel records the bill numbers and the amounts paid during the first 15 minutes the shop is open, on one particular day.

Bill number	01032	01573	01352	01406	01304
Amount paid	£2.30	£1.20	£3.25	£0.70	£2.30

- (a) Write these bill numbers in order.
Start with the smallest bill number, which is given for you.

01032,.....
(1)

- (b) What is the smallest amount paid?

£.....
(1)

- (c) What is the mean amount paid per customer?

£.....
(2)

Each of the bills is put in a box.
One of the bills is to be picked at random from the box.

- (d) What amount paid is the most likely to be picked?

£.....
(1)

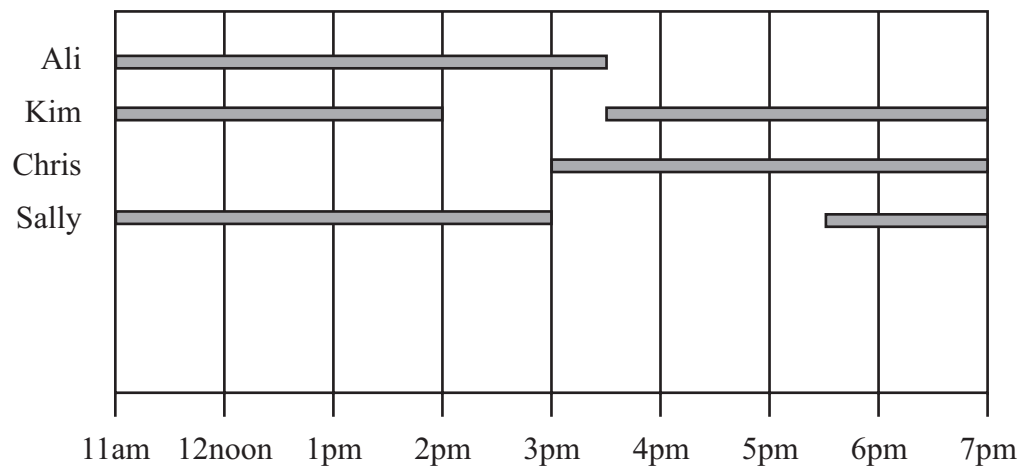
(Total 5 marks)

Q13



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14. The coffee shop is open from 11.00 am to 7.00 pm from Monday to Saturday. Four assistants work in the coffee shop. The diagram shows the times worked by each of these assistants in the shop each day.



- (a) What times does Ali work in the shop each day?

Start

Finish
(2)

- (b) How many hours does Kim work in the shop each day?

..... hours
(2)

Mabel wants to employ a fifth assistant.
She needs 3 assistants in the shop at any one time.

- (c) Between what times will Mabel need the new assistant to work in the shop?

Start

Finish
(2)

(Total 6 marks)

Q14



Leave
blank

15. Sally's rate of pay is £6.20 per hour.

She works $5\frac{1}{2}$ hours each day.

She works on each of the 6 days the shop is open.

This formula can be used to work out her weekly wage.

$$\text{Weekly wage} = \text{rate of pay per hour} \times \text{number of hours worked each day} \times 6$$

(a) What is Sally's weekly wage?

£.....
(2)

Sometimes Sally works extra hours.

Mabel pays Sally £6.20 plus half as much again for each extra hour.

(b) What is Sally paid for each extra hour?

£.....
(1)

Any tips received are shared between Mabel and the assistants in the ratio 1:4

On one particular day, the total amount received in tips was £90

(c) How much, in total, did the assistants receive?

£.....
(2)

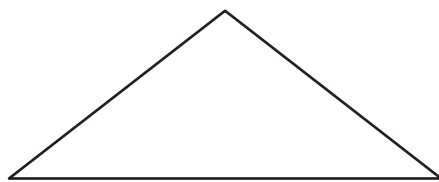
Q15

(Total 5 marks)



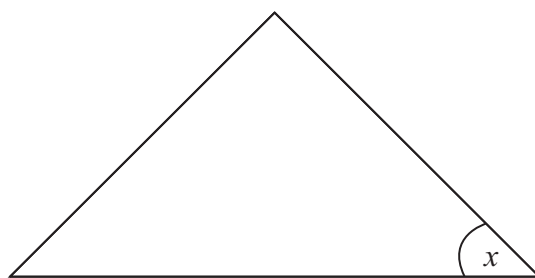
16. Serviettes for the tables are folded from triangles. They are folded along the line of symmetry.

(a) Draw the line of symmetry on this isosceles triangle.



(1)

On each table there is a card with the number of the table. This is an accurate diagram of a card.



(b) Measure the length, in centimetres, of the base of the card.

..... cm
(1)

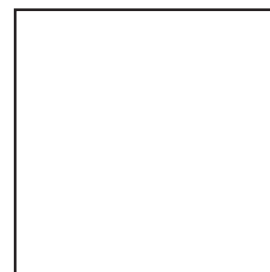
(c) Measure the size of the angle marked x .

..... °
(1)

The triangles for the table numbers are cut from square card.

(d) On the diagram, show how the cards can be cut.

Diagram NOT accurately drawn



(1)

Q16

(Total 4 marks)

TOTAL FOR PAPER: 60 MARKS

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