

Centre No.						Paper Reference	Surname	Initial(s)
Candidate No.						FM201/01	Signature	

Paper Reference(s)

FM201/01

Edexcel Functional Skills Mathematics

Level 2

Monday 9 June 2008 – Morning

Time: 1 hour 15 minutes



Examiner's use only

--	--	--

Team Leader's use only

--	--	--

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, 4 questions in Task 2, and 6 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.

This publication may be reproduced only in accordance with Edexcel Limited copyright policy. ©2008 Edexcel Limited.

Printer's Log. No.
H34678A
W850/RFM201/57570 8/8/5/2



Turn over
edexcel
advancing learning, changing lives

Leave
blank

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. The Wimbledon Tennis Championships are held every year.
In the men's singles championship there:

is one winner
is one runner-up
are two losing semi-finalists.

The table shows the prize money won by the top four players in 2006 and 2007.

	2006	2007
Winner	£655 000	£700 000
Runner-up	£327 000	£327 500
Each losing semi-finalist	£163 750	£175 000

- (a) What was the total prize money won by the top four players in 2007?

£
(1)

- (b) How much more prize money was won by the top four players in 2007 than in 2006?

£
(1)

(Total 2 marks)

Q1



Leave blank

2. 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 male players and some female players, the tables show 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

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

- (a) Which **male** player served 3 times as many aces as were served by the female player S Stosur?

.....
(1)

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

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

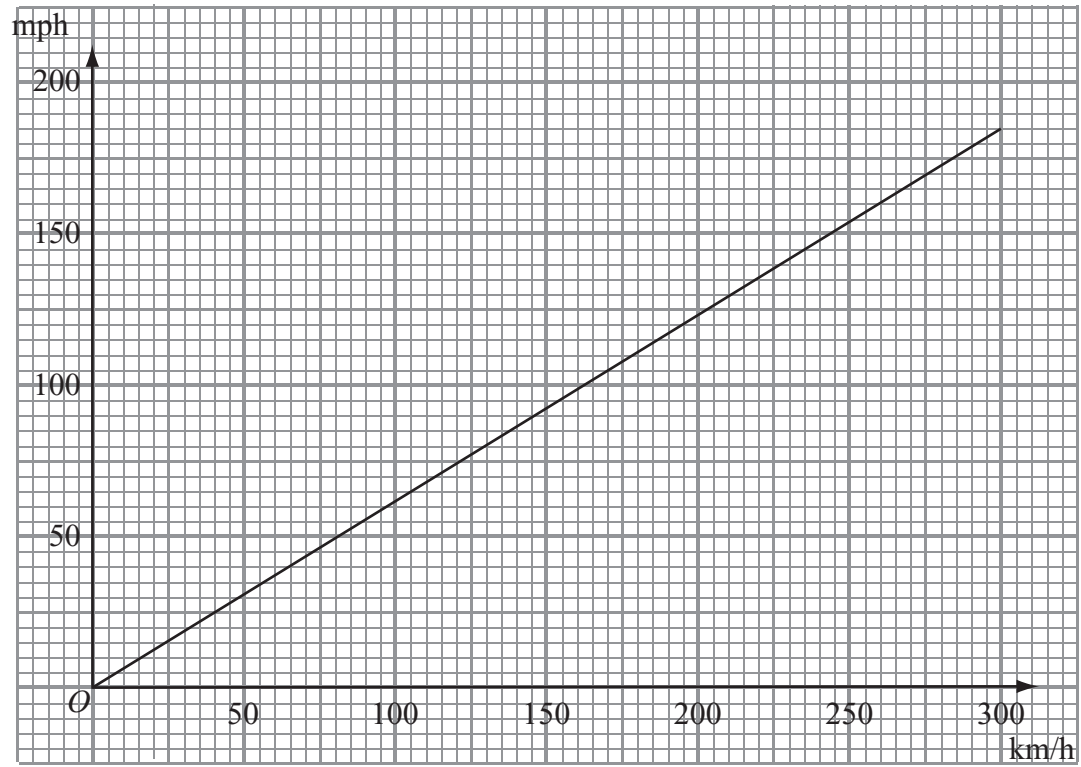
(Total 2 marks)

Q2



Leave blank

3. This graph can be used to convert between speeds in mph and km/h.



A Roddick served with a speed of 230 km/h.

(a) What is 230 km/h in mph?

..... mph
(1)

P Schnyder served with a speed of 115 mph.

(b) What is 115 mph in km/h?

..... km/h
(1)

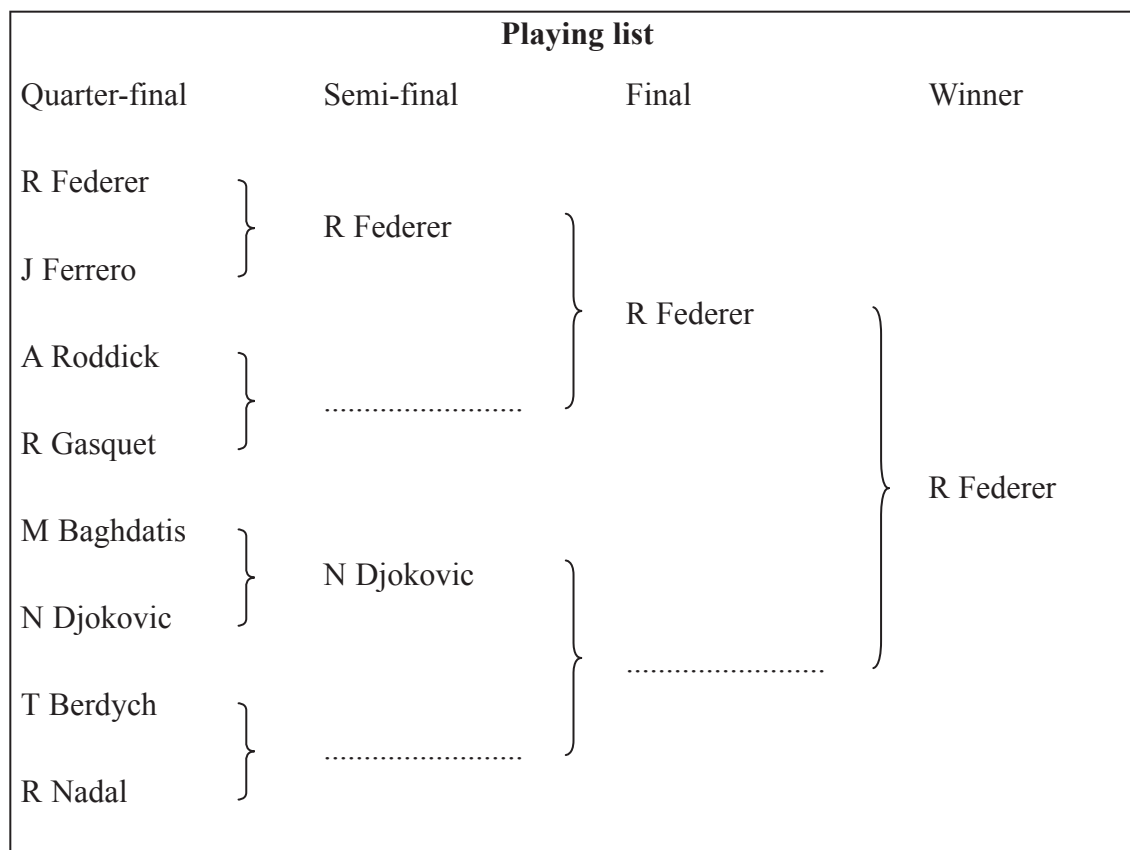
Q3

(Total 2 marks)



4. 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-final 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)

Q4

(Total 3 marks)



Leave
blank

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

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

	Centre court	Number 1 court	Number 2 court
Monday	£36	£34	£27
Tuesday	£36	£34	£27
Wednesday	£45	£42	£32
Thursday	£45	£42	£32
Friday	£54	£50	£36
Saturday	£54	£50	£36

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.

- (a) How much money does he have left after paying for the tickets?

£
(2)

- (b) What fraction of the £200 is the money that he has left?
Give your answer in its simplest form.

.....
(2)



Saneeta buys 7 tickets for the Number 1 court.
She spends £200 on tickets for Friday.
The other tickets are for Thursday.

(c) How many tickets did she buy for Thursday?

Leave
blank

.....
(2)

Q5

(Total 6 marks)

7

Turn over



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)

A full bottle of cordial holds 800 ml of cordial.

A full bottle of cordial is mixed with water to make a drink to take onto a court for a tennis match.

When mixed, the drink is put into a container.

(c) What is the minimum capacity, in litres, of the container?
1000 ml = 1 litre

..... litres
(2)

Q6

(Total 5 marks)



BLANK PAGE



TASK 2: OFFICES

Answer all FOUR 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)



Leave
blank

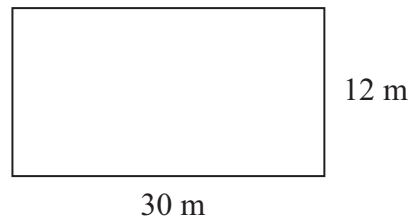


Diagram **NOT**
accurately drawn

This is the plan of the office in Plymouth.

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

£
(2)

Q7

(Total 6 marks)

8. The British Council for Offices says that every office worker should have a working space of between 12 m^2 and 17 m^2 .

An office has a total working space of 200 m^2 .

(a) What is the greatest number of office workers that this office has space for?

.....

(b) What is the least number of office workers that this office has space for?

.....

Q8

(Total 3 marks)



Leave blank

9. 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.

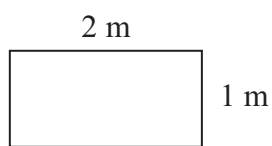


Diagram **NOT** accurately drawn

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

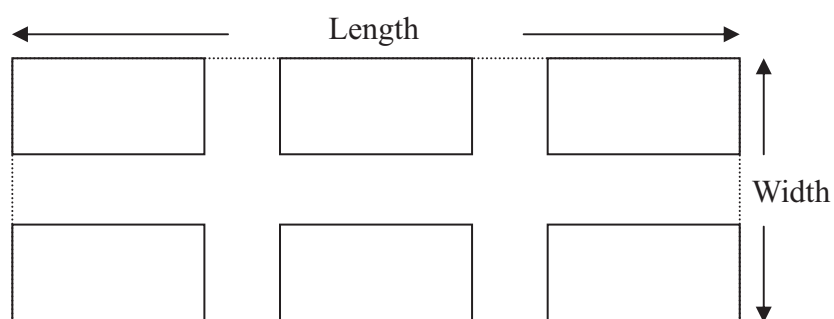


Diagram **NOT** accurately drawn

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

Length m

Width m

(3)

Q9

(Total 4 marks)



Leave
blank

10. In an office there are 35 workers.

$\frac{1}{5}$ of these workers are female.

(a) How many of the workers are male?

.....
(2)

(b) What percentage of the workers are female?

..... %
(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

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

..... hours minutes
(1)

All workers get a total of 1 hour each day for lunch and other breaks.

(d) What was the total time worked by this person for the whole week?
Give your answer in hours and minutes.

..... hours minutes
(3)

(Total 7 marks)

Q10



Leave blank

TASK 3: COFFEE SHOP

Answer all six questions in this task.

Write your answers in the spaces provided.

You must write down all stages in your working.

11. Mabel owns a coffee shop.

When a customer pays a bill, it is recorded with a bill number.
Mabel records the bill number, and the amount 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) 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.

(b) What is the probability that the bill picked will be for £2.30?

.....
(1)

Mabel wants to work out an estimate for the total of all the amounts paid for the whole day.
She is going to use the five amounts paid during the first 15 minutes the shop is open.

(c) Explain why this may not be a good estimate.

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

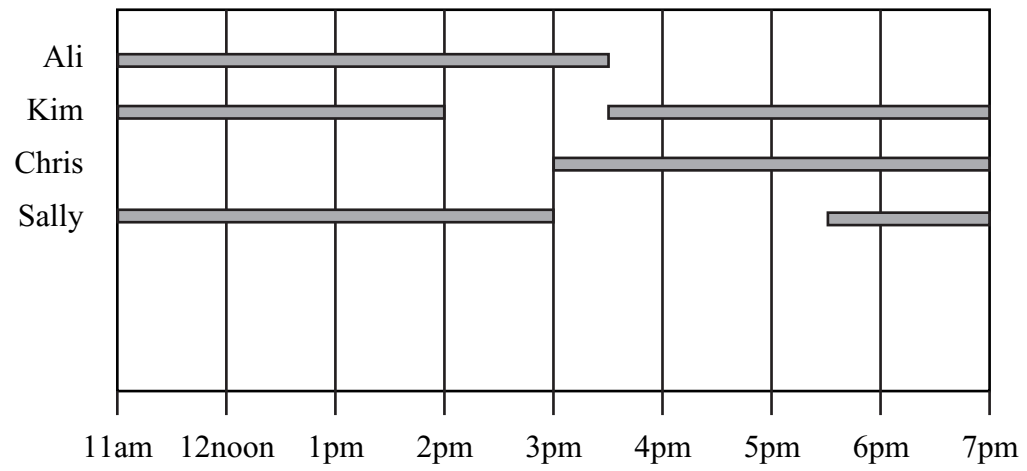
(Total 4 marks)

Q11



Leave
blank

12. 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.



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

Between what times will Mabel need the new assistant to work in the shop?

Start

Finish

(Total 2 marks)

Q12



H 3 4 6 7 8 A 0 1 5 2 0

Leave blank

13. 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)

Q13

(Total 3 marks)

14. In one day a total of 180 teas and coffees were sold.

The numbers of teas and coffees sold were in the ratio 2:7

(a) Work out the number of teas and the number of coffees sold that day.

Teas

Coffees
(2)

(b) Write the number of teas sold as a fraction of the total number of teas and coffees sold.

.....
(1)

Q14

(Total 3 marks)



Leave
blank

15. Here is a price list of the hot drinks that are sold in the coffee shop.

Price list	
Pot of tea	£1.10
Cup of filter coffee	£1.20
Mug of filter coffee	£1.40
Decaffeinated coffee	£1.20
Cappuccino coffee	£1.50
Hot chocolate drink	£1.50

(a) Find the total cost of

- 1 pot of tea
- 1 cappuccino coffee
- 2 hot chocolate drinks

£
(2)

The coffee shop adds a service charge of $12\frac{1}{2}\%$ to each bill.

(b) What is the service charge added to a bill of £8.40?

£
(2)

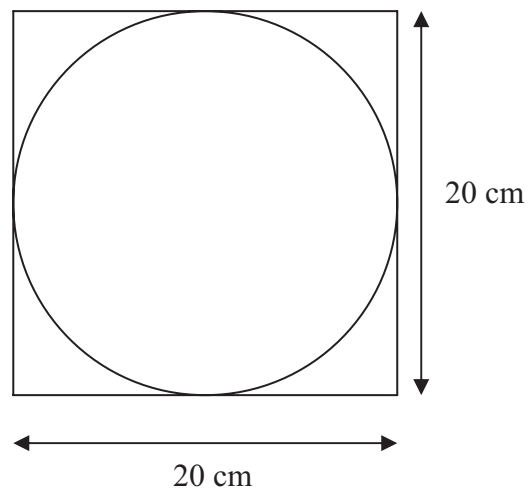
(Total 4 marks)

Q15



Leave blank

16. Table mats used in the coffee shop are circular.
The mats are cut from square card of side 20 cm.



The area of a circle is given by the formula:

$$\text{Area} = \pi \times r \times r$$

Use the π button on your calculator or use a value of π as 3.14

- (a) What is the area of a circular mat?

..... cm²
(2)

When a circular mat is cut from a square card, the part of the card that is not used is wasted.

- (b) What area of one card is wasted?

..... cm²
(2)

Q16

(Total 4 marks)

TOTAL FOR PAPER: 60 MARKS

END



BLANK PAGE



BLANK PAGE

