

Write your name here

Surname

Other names

Edexcel
Functional Skills

Centre Number

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Mathematics

Level 2



6–10 February 2012

Time: 1 hour 30 minutes

Paper Reference

FSM02/01

You must have:

Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, compasses.

Total Marks

| |
|--|
| |
|--|

My signature confirms that I will not discuss the content of the test with anyone until the end of the 5 day test window.

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

Information

- The total mark for this paper is 48.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- **Where you see this sign you must show clearly how you get your answers because marks will be awarded for your working out.**



Advice

- Read each question carefully before you start to answer it.
- Show all stages in the calculations.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

P40707A

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6/6/4



PEARSON

SECTION A: The furniture warehouse

Answer all questions in this section.

Write your answers in the spaces provided.

- 1** Mr Hazim wants to buy 2 chairs, a desk and a wardrobe.

Here are the prices.

Chair £22.50

Desk £63

Wardrobe £156

(a) What is the total price of the 4 items?

(2)

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



A large empty rectangular box for showing the calculation.



The furniture warehouse adds VAT at 20% to all prices.

Mr Hazim gets a discount of $\frac{1}{3}$ off the prices, including VAT.

(b) Work out the total amount Mr Hazim has to pay.

(5)

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



A large empty rectangular box for writing the solution to the problem.

(Total for Question 1 is 7 marks)



2 Mr Jones is the owner of the furniture warehouse.

He is going to interview 4 people for jobs at the warehouse.

Mr Jones needs a form to record information at the interviews.

He wants to put all the information on one form.

For each person he wants to record

- their name
- if they can drive a van
- the date they can start.

He also wants to give them a score out of 10 for each of these qualities.

- professionalism
- experience
- communication

Design a form for Mr Jones to use.

(3)



Show your form in the box below.



(Total for Question 2 is 3 marks)



3 Mick delivers furniture for Mr Jones.
He uses his own van.

Mr Jones paid Mick £100 last week for fuel.

Last week Mick drove 283 miles.
Mick works out that the fuel cost 32p per mile.

Mick thinks that Mr Jones did not pay him enough for fuel last week.

(a) Is Mick correct?
Explain why you think this.

(2)

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



Pat helps Mick with deliveries.

They have a list of deliveries for today.
The list shows the times the customers want the deliveries.

| | |
|--------------|--------------------------|
| Mr Hazim | between 9 am and 11 am |
| Miss Guthrie | before 5 pm |
| Mr Jewson | between 2 pm and 3.30 pm |
| Mrs Lal | by 12 noon |
| Mr Chang | between 10 am and 1 pm |

Mick and Pat


- load the van for the day and leave the warehouse at 10 am
- must return to the warehouse by 4.30 pm
- take a 30 minute lunch break between 12 pm and 2 pm
- need 1 hour to travel to each customer and make the delivery
- need 30 minutes to return to the warehouse at the end of the day.



(b) Design a time plan for Mick and Pat.

(4)

Use the box below to show your plan.



(Total for Question 3 is 6 marks)



SECTION B: The fair

Answer all questions in this section.

Write your answers in the spaces provided.

- 4 Scarlett organises a fair in the village hall to raise money for charity.

Scarlett spends £63.10 on prizes for the raffle.
She is going to sell the raffle tickets for 50p each.

Scarlett wants to

- sell enough raffle tickets to get the £63.10 back
- make a profit of at least £350 to give to charity.

How many raffle tickets does Scarlett need to sell?

(3)

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



(Total for Question 4 is 3 marks)



5 Kim uses this recipe to make cakes to sell at the fair.

Ingredients for 12 cakes

| | |
|--------------------|-------|
| Self raising flour | 175 g |
| Margarine | 110 g |
| Caster sugar | 110 g |
| Eggs | 2 |

Kim wants to make between 50 and 60 cakes.

Kim already has these quantities.

| | |
|--------------------|-------|
| Self raising flour | 1 kg |
| Margarine | 600 g |
| Caster sugar | 750 g |
| Eggs | 12 |

Does Kim have enough of each ingredient to make between 50 and 60 cakes?

(4)

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



Large empty box for showing the answer.

(Total for Question 5 is 4 marks)



- 6 Scarlett checks the health and safety regulations for the fair. She needs to work out the available floor area in the village hall.

The diagram shows the village hall and the stalls at the fair.

The available floor is **not** shaded.

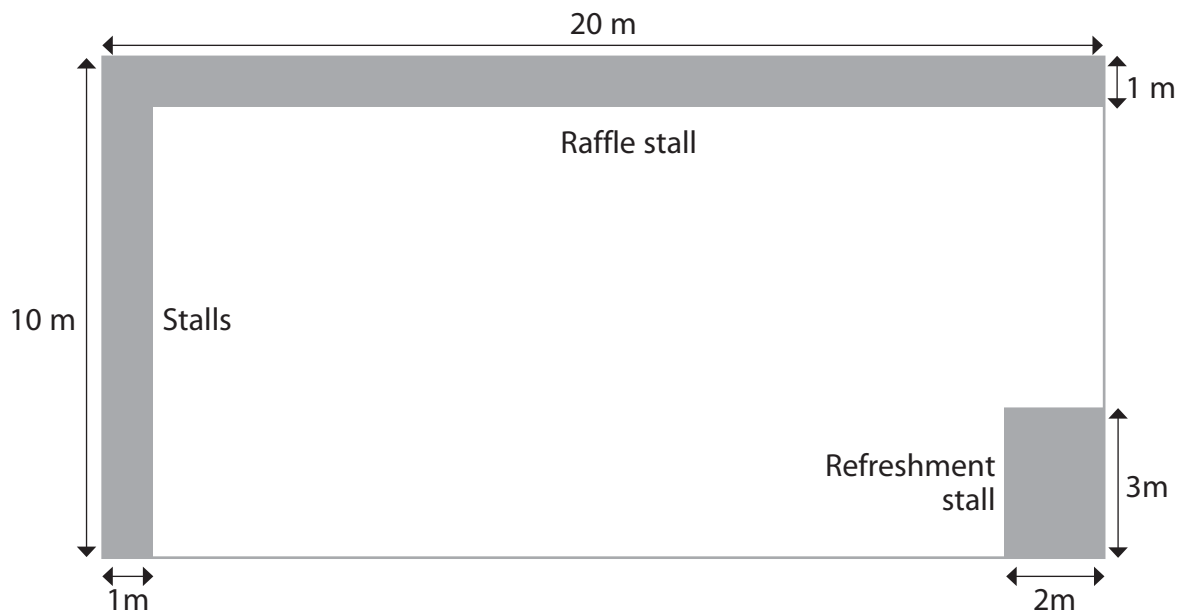


Diagram **NOT** accurately drawn

(a) Work out the available floor area.

(4)

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



Large empty box for showing the solution.



Scarlett uses this formula to work out the maximum number of people that can be in the village hall at the same time.

$$P = 3A \div 2$$

P = the maximum number of people

A = the available floor area in m²

(b) What is the maximum number of people that can be in the village hall at the same time?

(3)

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



A large empty rectangular box for writing the solution to the problem.

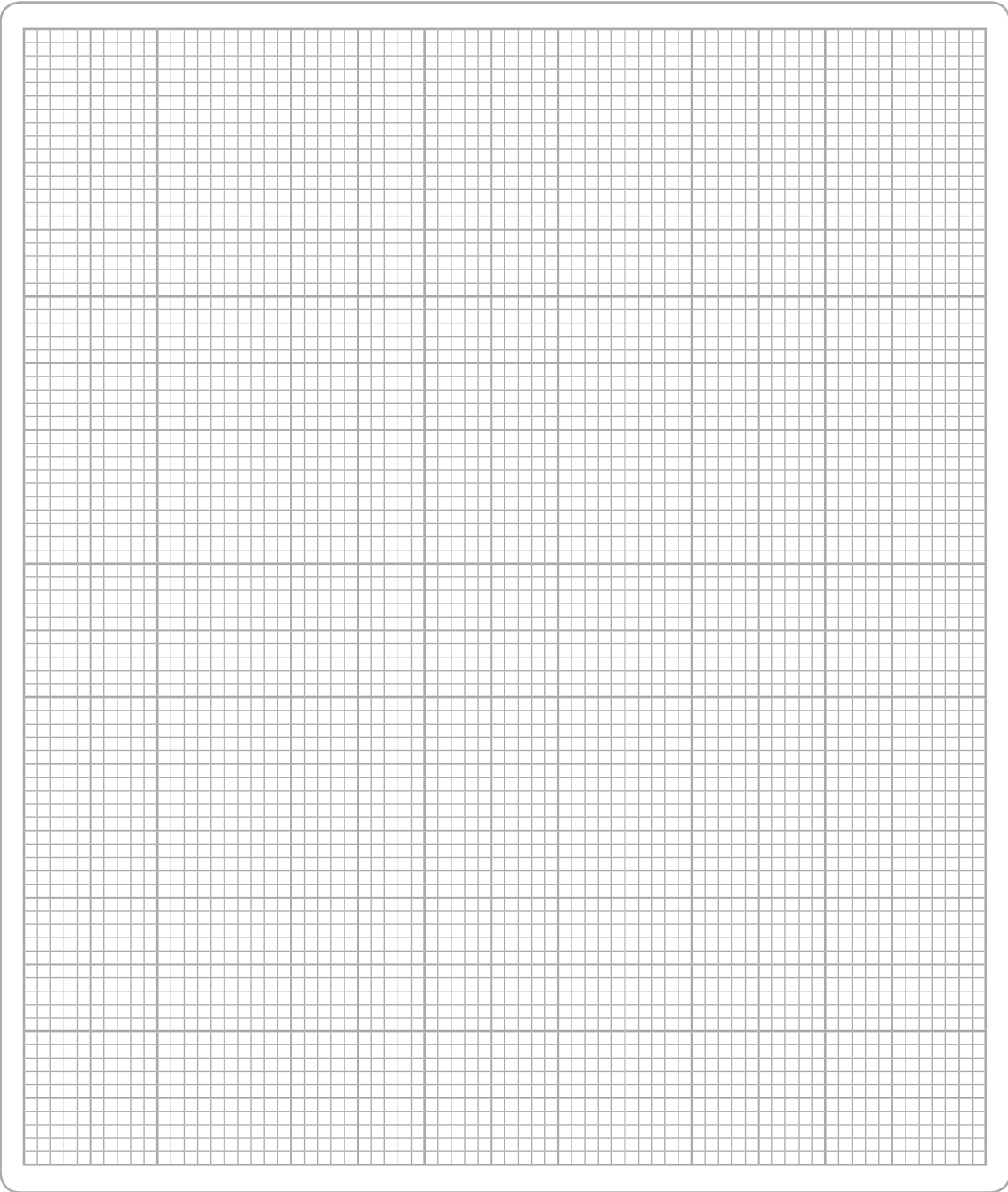


Scarlett wants a space for games on the village green.
She must fence the space for the games.

The space will be rectangular with length 60 m and width 45 m.

(c) Make an accurate scale drawing of the space for the games on the grid. (2)

Key: 1 cm on grid = 5 m on the village green



(Total for Question 6 is 9 marks)



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SECTION C: A trip into town

Answer all questions in this section.

Write your answers in the spaces provided.

7 Ewan wants a new mobile phone.

He sees these two offers on a phone he likes.

Alright Mobiles

£25 per month
for a 12 month contract

Includes
350 minutes of calls per month
200 texts per month

Extra calls are 10p per minute
Extra texts are 5p each

Better Phones

One payment of £360
for a 1 year contract

Includes
350 minutes of calls per month
500 texts per month

Extra calls are 15p per minute
Extra texts are 10p each

Ewan thinks he is going to use his mobile phone for about

- 400 minutes of calls per month
- 300 texts per month.

He wants to know which offer will cost him less money.



Which offer should Ewan choose?

(6)

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



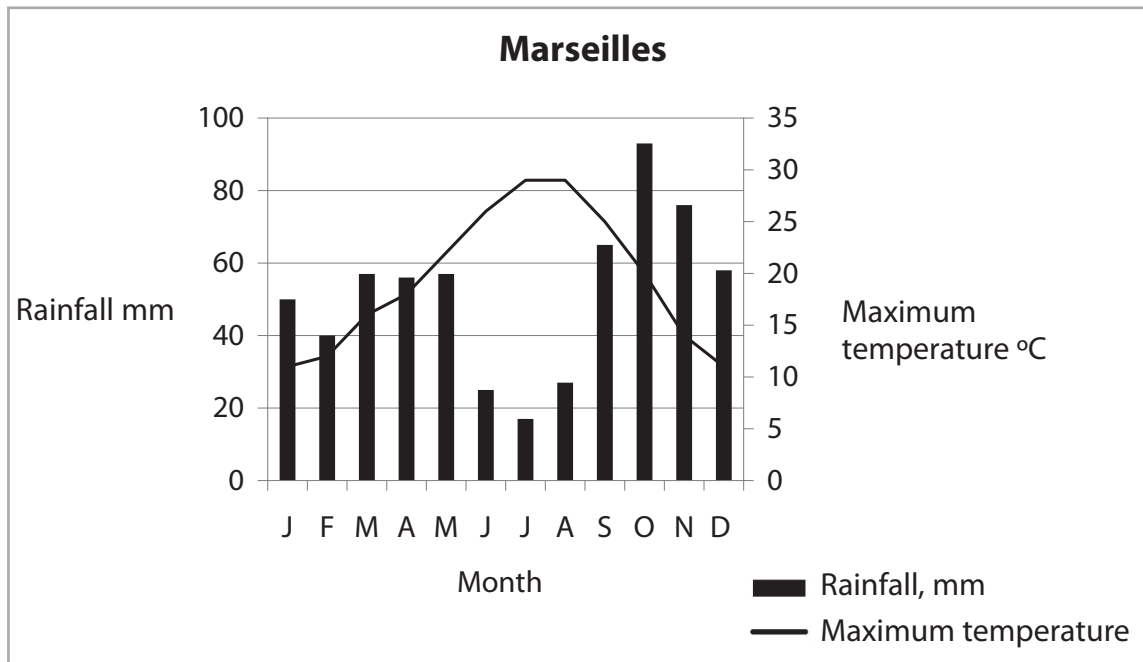
A large, empty rectangular box with rounded corners, intended for the student to show their working out for the question above.

(Total for Question 7 is 6 marks)



- 8 Ewan and his partner Nita want to go on holiday in July. They go to the travel agent.

Ewan finds this graph about the climate in Marseilles.



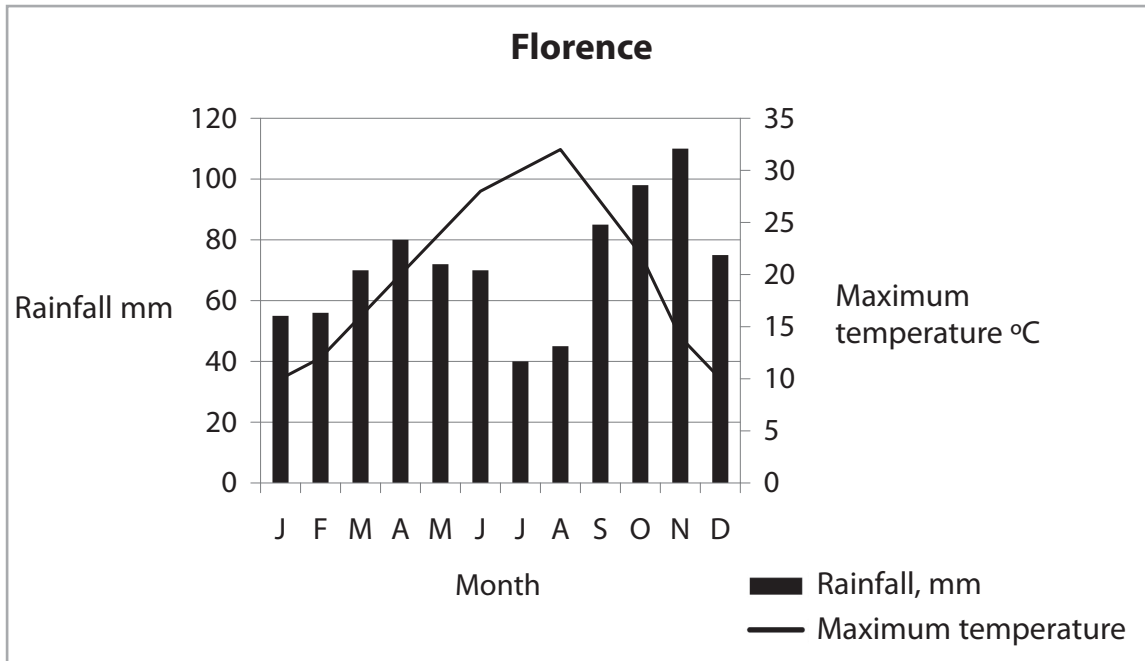
- (a) Write down the rainfall and the maximum temperature in Marseilles in July.

(2)

Write your answers in the box below



Nita finds this graph about the climate in Florence.



(b) Write **two** statements to compare the climate in Marseilles with the climate in Florence. (2)

Write your statements in the box below.

(Total for Question 8 is 4 marks)



9 Nita has to buy a birthday present for her brother.
She finds some belts in a shop.
The boxes below show some information about the belts.

The lengths of the belts are given in inches.

Not all the brands give the same names to the lengths.

| | |
|---------------|------------|
| Petrol | £35 |
| Small | 32 |
| Medium | 34 |
| Large | 36 |

| | |
|-------------|------------|
| Rafe | £30 |
| Small | 32 |
| Medium | 36 |
| Large | 38 |
| Extra Large | 42 |

| | |
|-----------------|---------------|
| Dinosaur | £45.99 |
| Small | 32 |
| Medium | 34 |
| Large | 36 |

| | |
|--------------|------------|
| Chief | £45 |
| Small | 30 |
| Medium | 32 |
| Large | 34 |
| Extra Large | 36 |

| | |
|--------------|------------|
| Jerry | £25 |
| Small | 32 |
| Medium | 36 |
| Large | 40 |
| Extra Large | 44 |

| | |
|---------------|------------|
| Norman | £30 |
| Small | 30 |
| Medium | 32 |
| Large | 34 |
| Extra Large | 36 |

Nita knows the belt must be at least 90 cm long.
Nita wants to spend less than £40

Nita does **not** want to buy a 'Large' belt or an 'Extra Large' belt.

Use
1 inch = 2.54 cm

Which belt should Nita buy for her brother's birthday?

(3)

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



Total for Question 9 is 3 marks)

10 Ewan and Nita go to the car park to get their car.

Here are the parking charges.

| Length of stay | Charge |
|---|--------|
| Up to 1 hour | 90p |
| 1 to 3 hours | £3.30 |
| Each additional hour or part of an hour | £1.80 |

The car park clock shows 18:10

Nita says

‘We parked at twenty five past one this afternoon.’

Ewan pays with a £10 note.

How much change should they get?

(3)

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



(Total for Question 10 is 3 marks)

TOTAL FOR PAPER IS 48 MARKS



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