

Write your name here

Surname

Other names

Edexcel
Functional Skills

Centre Number

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Candidate Number

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Mathematics

Level 2



18–22 June 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

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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 ►

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PEARSON

SECTION A: Party

Answer all questions in this section.

Write your answers in the spaces provided.

- 1 Bella is planning a party.
She is going to hire a marquee for her party.

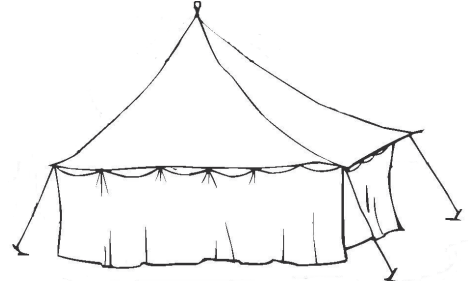
She finds out the hire price of the same size of marquee
from two different companies.

Parties R Us

£560 plus VAT at 20%

Event supplies

£690



Bella wants to choose the cheapest company.

(a) Which company should she choose?

(2)

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



Bella is making bunting to hang around the edge of the marquee.

She is going to hang the bunting around the shape of a rectangle 10 m long and 6 m wide.

The bunting should be between 2 and 3 times the perimeter of the rectangle.

Bella has already made 70 m of bunting.



(b) Has Bella made enough bunting?

(3)

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



A large empty rectangular box for writing the answer and showing the working.

(Total for Question 1 is 5 marks)



- 2 Bella is going to order some burgers for the party.
She needs to order at least 80 burgers.

There are 6 burgers in each pack.
Each pack of burgers costs £3

She sees this special offer.



Bella thinks she will save over £10 if she orders the burgers while they are on special offer.

Is Bella correct?
Show why you think this.

(4)

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



Blank area for showing the answer.

(Total for Question 2 is 4 marks)



- 3 Bella wants to make 100 chocolate truffles for the party. She is going to use this recipe.

Chocolate truffles
makes 40

6 ounces chocolate
 $\frac{1}{4}$ pint cream
1 ounce butter

Bella knows that 1 ounce is about 28 g.

Bella has two 150 g bars of chocolate.

(a) Does Bella have enough chocolate to make 100 chocolate truffles?

(4)

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



Bella is going to make small boxes to put the chocolate truffles in.

Each box will

- be in the shape of a cuboid
- have a lid.

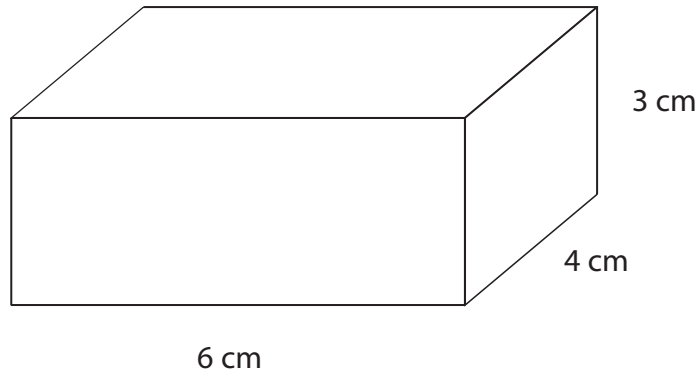
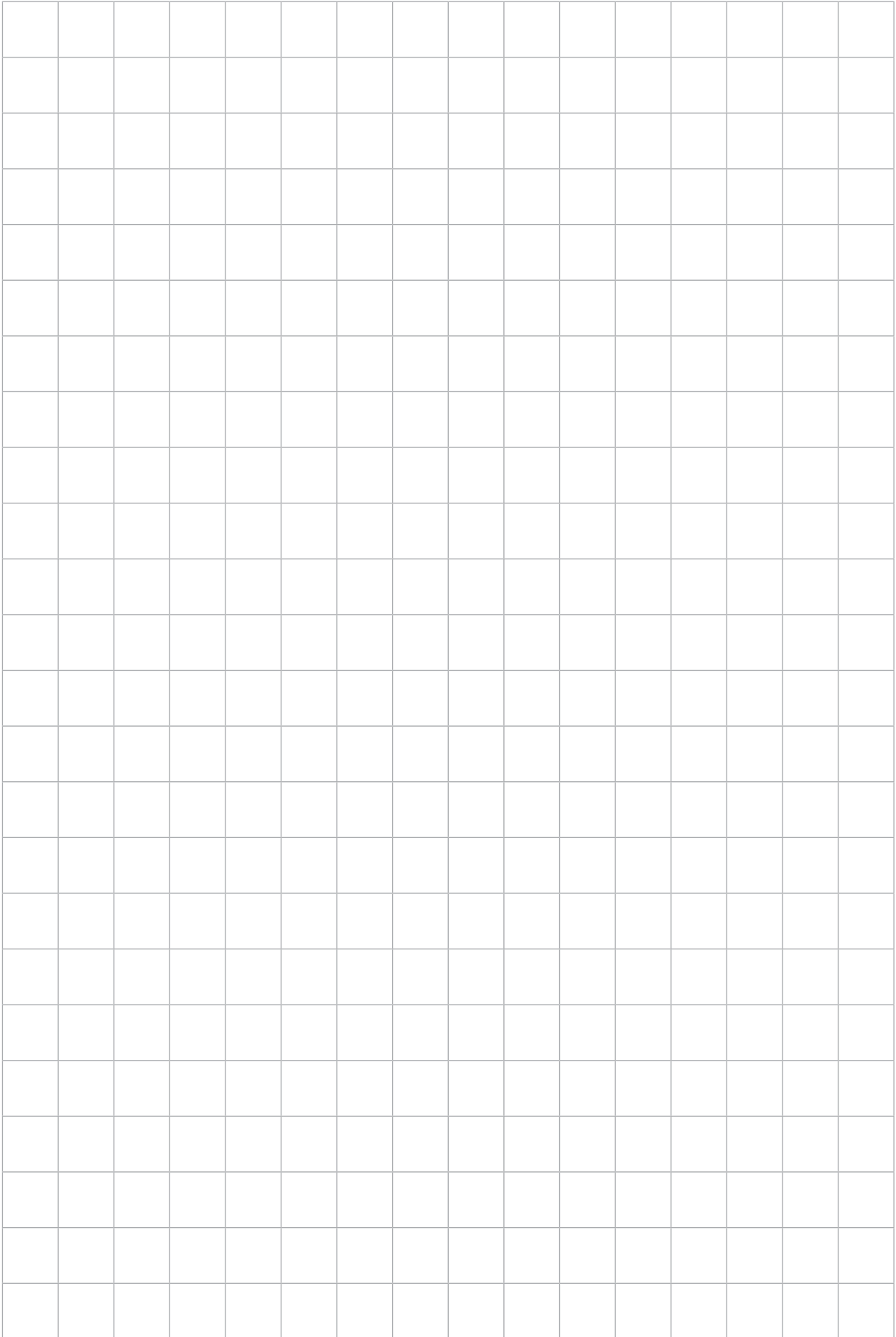


Diagram **NOT** accurately drawn

Bella needs a net of a box.

(b) On the centimetre grid, draw an accurate net of this box for Bella. (3)





(Total for Question 3 is 7 marks)



SECTION B: Decorating

Answer all questions in this section.

Write your answers in the spaces provided.

- 4 Joe and Adoha are going to do some decorating in their house.
Adoha is going to paint the doors.

Adoha is going to paint a total of 6 doors.
She will paint **both** sides of each door.

She has 2 tins of paint.
Each tin of paint covers 9 m^2

Adoha wants to know if she has enough paint.

She measures the doors.
Adoha finds that each door is 1.95 m high and 85 cm wide.

(a) Work out the area of one side of a door.

(3)

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



(b) Does Adoha have enough paint?

(2)

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



(Total for Question 4 is 5 marks)



5 Joe is going to put wallpaper on all the walls of a bedroom.

He finds this formula to work out the number of rolls of wallpaper he needs.

$$R = \frac{2L + 2W}{2.5}$$

R = number of rolls of wallpaper needed

L = length of room (m)

W = width of room (m)

The bedroom has

a length of 5.6 m

a width of 4.8 m

(a) How many rolls of wallpaper does Joe need to buy?

(3)

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



Joe is also going to put wallpaper on the walls in the lounge.

He needs to buy 12 rolls of the wallpaper for the lounge.

The wallpaper is on sale in three shops.

<p>Wayne's Wallpaper</p> <p>Wallpaper rolls £9.90 each</p> <p>Special offer Buy 2 get the 3rd free</p>	<p>New Rooms</p> <p>Wallpaper rolls £10.20 each</p> <p>Special offer $\frac{1}{4}$ off all wallpaper</p>	<p>Decorate</p> <p>Wallpaper rolls £6.75 each</p>
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Joe wants to spend as little as possible on the wallpaper.

(b) Which shop should Joe buy the 12 rolls of wallpaper from? (5)

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



A large empty rectangular box with rounded corners, intended for a student to provide an answer to a question.

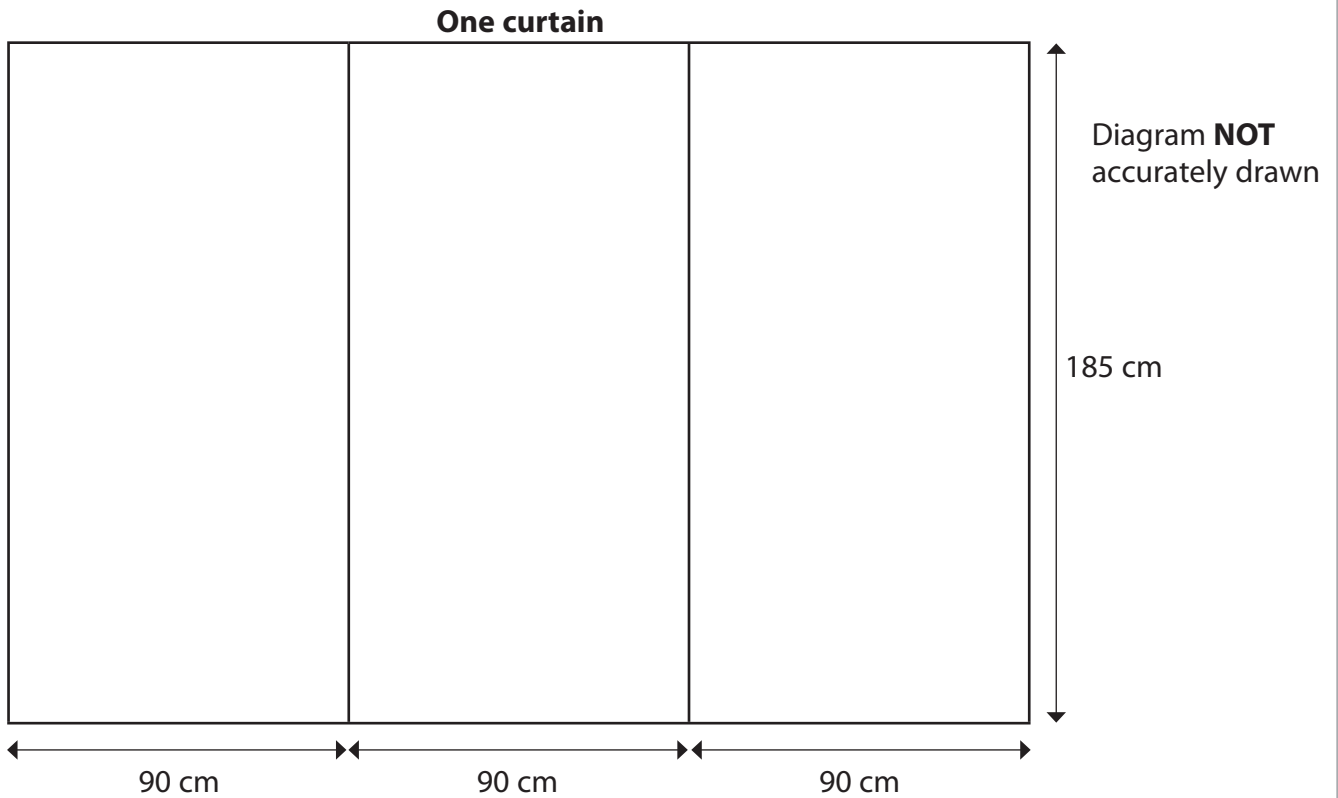
(Total for Question 5 is 8 marks)



6 Adoha is going to make curtains for the lounge.

She finds some material she likes in her local shop.
The material is 90 cm wide.

Adoha needs 3 pieces of this material to make each curtain.
Each piece of material needs to be 185 cm long.



Adoha needs to make 2 curtains.

The material left in the shop is 12 m long.

Is 12 m of material enough for Adoha to make 2 curtains?

(3)



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 work.

(Total for Question 6 is 3 marks)



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SECTION C: School

Answer all questions in this section.

Write your answers in the spaces provided.

7 Katharine has a job in a school office.

Ms Green, Mr Smith and Dr Patel are coming to the school for interviews next Monday.

They will each have

- an individual interview with the Headteacher
- an individual interview with the Head of English
- an individual interview with the Head of Year 10

Each interview will take 30 minutes.

They will all have

- a 45 minute tour of the school together at 10 30
- lunch together from 12 30 to 13 30

They will start the day at 10 30 and they must finish by 15 00

Katharine has to make a time plan for the day showing the start time for each interview.

Make a time plan for the day.

(4)



Write your time plan in the box below.

(Total for Question 7 is 4 marks)

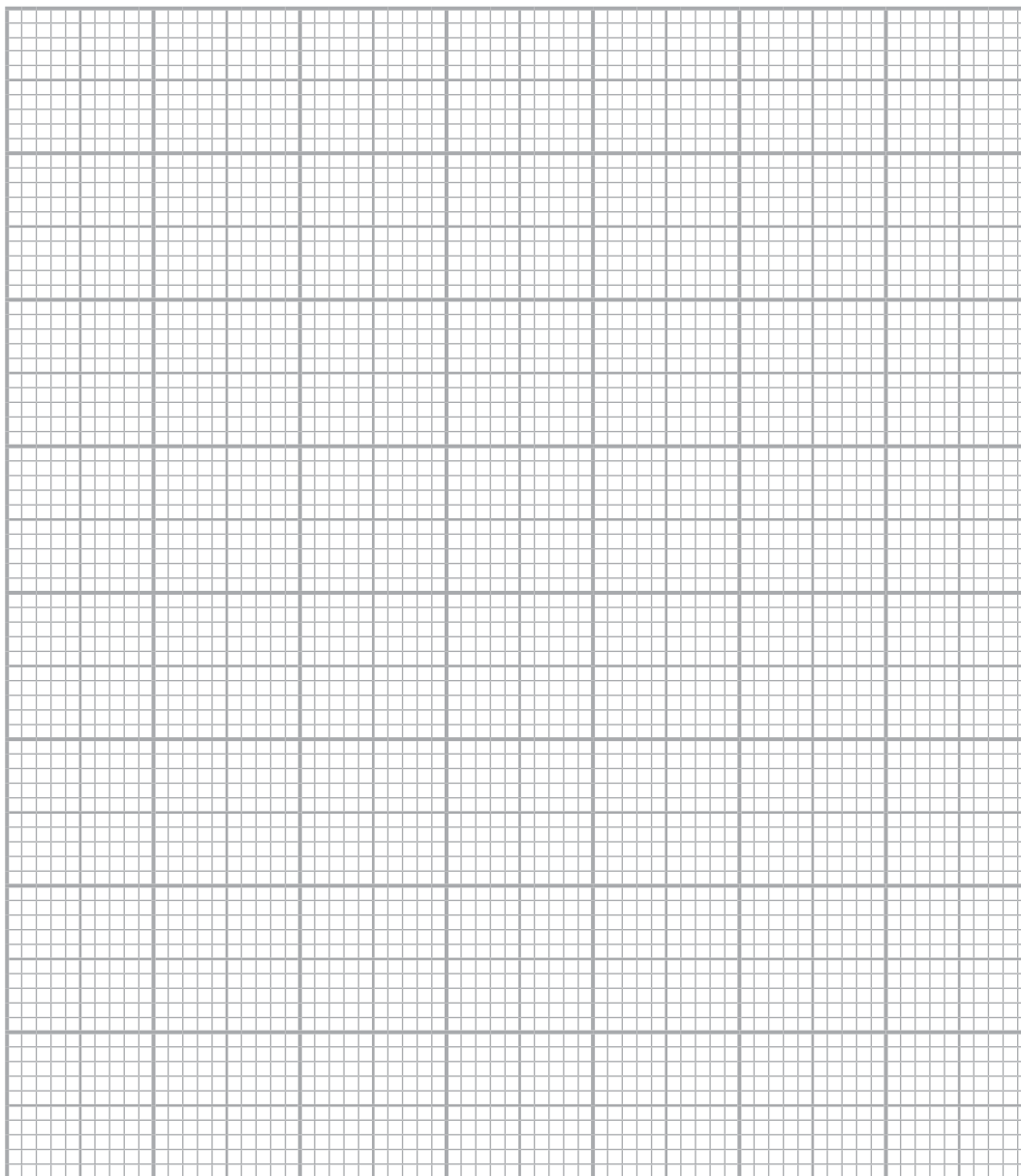


- 8 The Headteacher wants a display of student absence for the first week of term.
The display must show the number of girls and the number of boys absent that week.
Katharine uses the information in this table to make the display.

	Mon	Tue	Wed	Thu	Fri
Number of girls absent	18	23	20	25	38
Number of boys absent	25	15	32	36	40

(a) Draw a chart or graph to display this information.

(3)



The Headteacher needs to compare boys' absence this year with boys' absence last year.

In the first week of term last year

- the mean average was 33.4 boys absent each day
- the range of the number of boys absent was 18

The Headteacher asks Katharine to work out these statistics for boys' absence for the first week of term this year.

(b) Use the information in the table on page 16 to work out these statistics for Katharine. (3)

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



(c) Show how you can check your calculation of the mean. (1)

Write your check in the box below.

(Total for Question 8 is 7 marks)



9 The Head of Year 7 is organising a trip to the zoo for Year 7

There are 138 students in Year 7
12 teachers will also go on the trip.
They will all go on the trip by coach.

Katharine needs to book the coaches for the trip.
She finds out the price of coaches.

Rover	79 seats	£460
Traveller	53 seats	£280

Tickets for the zoo cost £9.50 for each student.
Teachers go free.

There is a total budget of £2200 for the trip.

Katharine needs to work out which coaches to book and all the costs.

Work out which coaches Katharine should book.

(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.



[Empty rectangular box for answer]

(Total for Question 9 is 5 marks)

TOTAL FOR PAPER IS 48 MARKS



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