

Write your name here

Surname

Other names

**Pearson Edexcel
Functional Skills**

Centre Number

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Candidate Number

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Mathematics

Level 1



21–25 July 2014

Time: 1 hour 30 minutes

Paper Reference

FSM01/01

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.**
- **Check your working and your answers at each stage.**



Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.

Turn over ►

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PEARSON

SECTION A: Seaside hotels

Answer all questions in this section.

Write your answers in the spaces provided.

- 1 Sima is a chef at a seaside hotel.

She uses a form to check that she has enough meals ready for the next day.

If the number of meals left at the end of Monday is less than the number of meals needed for Tuesday, she must prepare more meals.

Sima starts to fill in the form below for Monday.

Monday					
Meal	Meals ready in fridge at start of day	Meals sold today	Meals left at the end of the day	Meals needed ready for Tuesday	Prepare more? Yes / No
lamb shank	7		5	4	No
chicken curry	8			4	
steak pie	9			6	
fish pie	7			6	

- (a) Which meals must Sima prepare for Tuesday?
Complete the form.

(3)

You can use the box below for your working.

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Sima is going to make lasagne.

Here is a list of the main ingredients.

lasagne - 4 portions

500 g minced beef

12 pasta sheets

$\frac{3}{4}$ pint of milk

150 g cheese

1 jar of sauce

(b) How much milk does Sima need for 8 portions of lasagne?

(3)

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



(Total for Question 1 is 6 marks)



2 Sima needs to cook a 7 kg turkey.

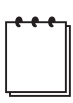
She finds these cooking instructions

- cook the turkey for 20 minutes for each kg
- add an extra 125 minutes.

The turkey needs to finish cooking at 11:30 am.
Sima thinks that the turkey should start cooking at 7:00 am.

(a) Is Sima correct?
Show why you think this.
Show a check of your answer. (6)

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



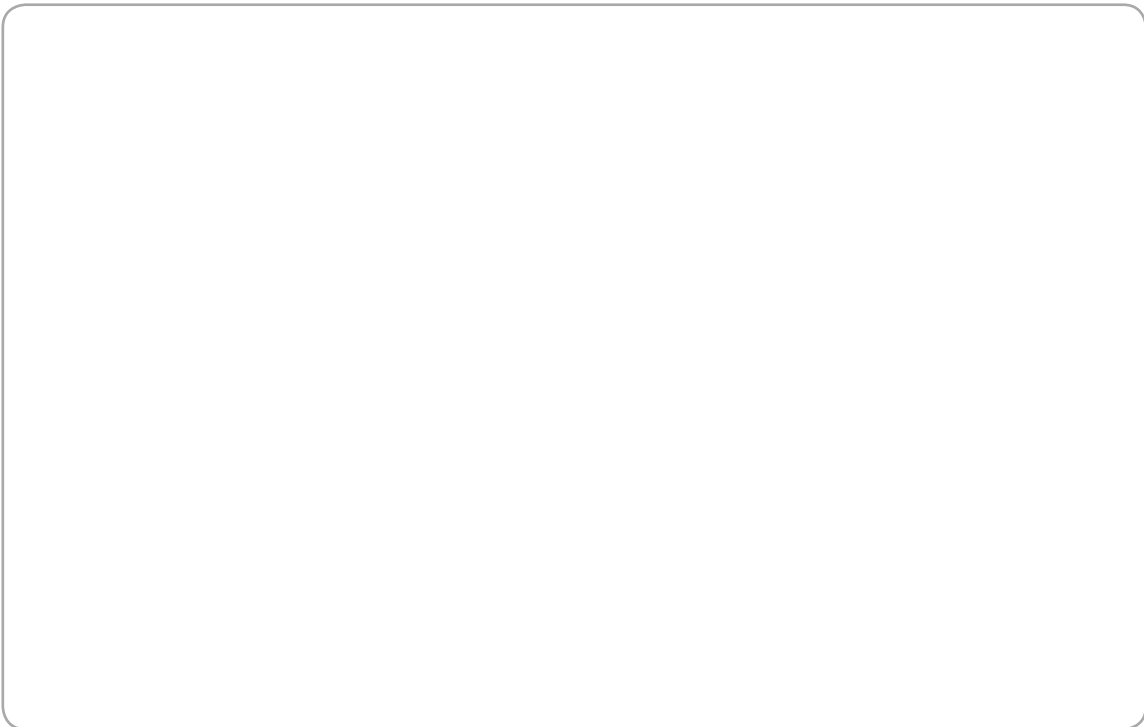
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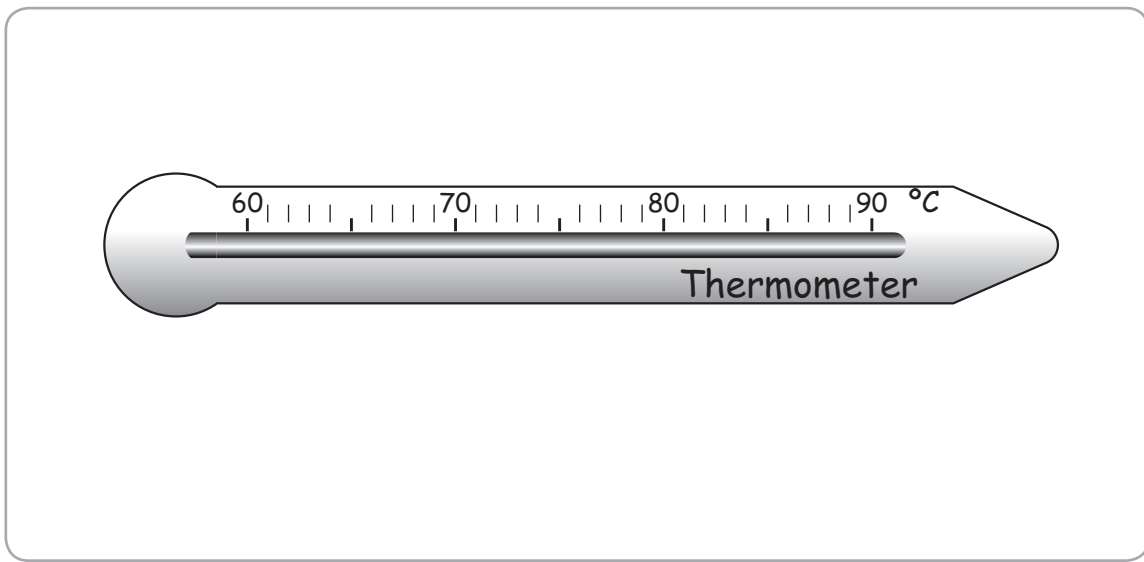
Use the box below for your check.



Sima is going to use a meat thermometer to check the temperature of the turkey.
The turkey is safely cooked when the temperature is within 3°C of 82°C .
Sima needs to know the lowest and the highest temperature the turkey should be.

(b) Show these temperatures on the thermometer for Sima. (1)

Show the lowest temperature and the highest temperature on the diagram.



(Total for Question 2 is 7 marks)



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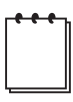
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3 Roy is the sales manager at another seaside hotel.
He has a daily target to book at least 80% of the rooms.
The hotel has 120 rooms.
Roy has booked 92 rooms on Wednesday.

Has Roy met his target on Wednesday? (3)

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



(Total for Question 3 is 3 marks)



SECTION B: Moving home

Answer all questions in this section.

Write your answers in the spaces provided.

- 4 Clare and Dave want to buy a house together.

They will need to borrow money from the bank.

Clare and Dave are going to borrow 2 times their total annual salary.

Dave's annual salary

£23,692

Clare's annual salary

£24,450

(a) How much money do Clare and Dave borrow from the bank?

(3)

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



Clare and Dave find a house they want to buy.

The asking price is

one hundred and nineteen thousand and ninety five pounds.

(b) Write this amount in numbers for Clare and Dave.

(1)

Write your answer in the box below.

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Clare has some curtains at her old flat.
She wants to know if the curtains will fit the window at the new house.

The length of the curtains is 6 ft.

Dave measures the window at the new house.
The height of the window is 195 cm.

Use 1 ft = 30 cm

(c) Do the curtains fit the window at the new house?

(2)

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



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



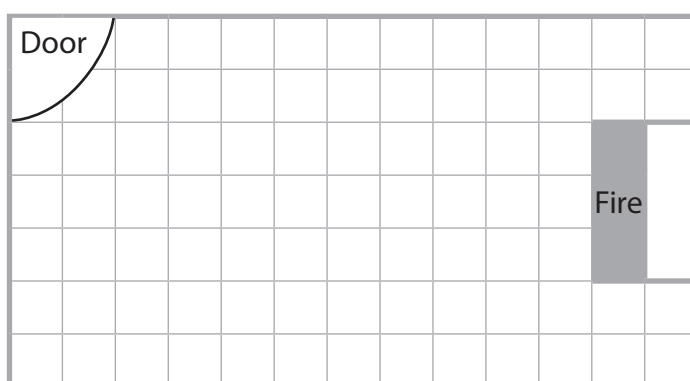
Clare has a plan of the living room at the new house.
She wants to know where to put the sofa.

The sofa needs a rectangular space with length 250 cm and width 100 cm.
The sofa must be

- against a wall in the living room
- at least 150 cm away from the fire.

(d) Draw the space for the sofa on the plan for Clare.

(2)



Key: 1 square on the plan is 50 cm by 50 cm in the living room.

— wall

(Total for Question 4 is 8 marks)



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5 Clare and Dave need boxes to pack their things.
Dave sees these offers for boxes from two online shops.

Move Matters
Removal boxes
£3.86 each

Pack and Move
Removal boxes
£4.10 each
Buy 20 for £75

Dave will buy all of the boxes he needs from one shop.
He is going to buy 70 boxes.
He wants to pay the cheapest total price.

Which shop should Dave choose? (5)

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



Large empty box for showing the solution.

(Total for Question 5 is 5 marks)



- 6 Clare and Dave hire a van to move their things to the new house. Dave draws this sketch map of the routes.

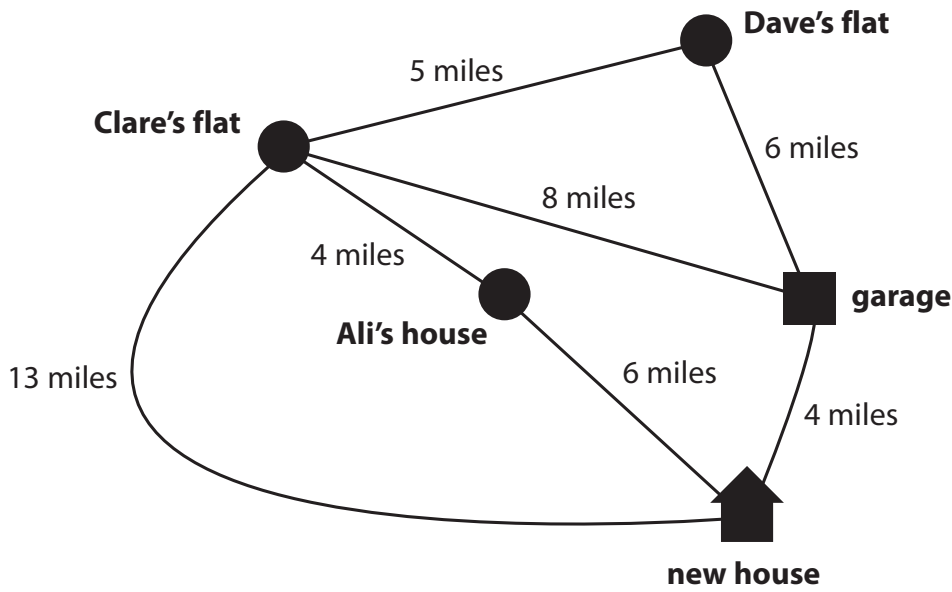


Diagram **NOT** accurately drawn

They are going to start by collecting the van from the garage.

They need to pick up

- a table from Ali's house
- things from Clare's flat
- things from Dave's flat.

Then they are going to take everything to the new house. They are going to finish by taking the van back to the garage.

Dave wants to calculate the shortest route for the journey.

What is the shortest route?
How many miles must they drive the van?

(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 working out.

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(Total for Question 6 is 3 marks)



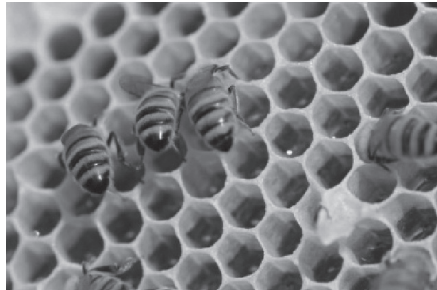
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SECTION C: Keeping Bees

Answer all questions in this section.

Write your answers in the spaces provided.

- 7 Nita keeps bees.
She sells the honey.



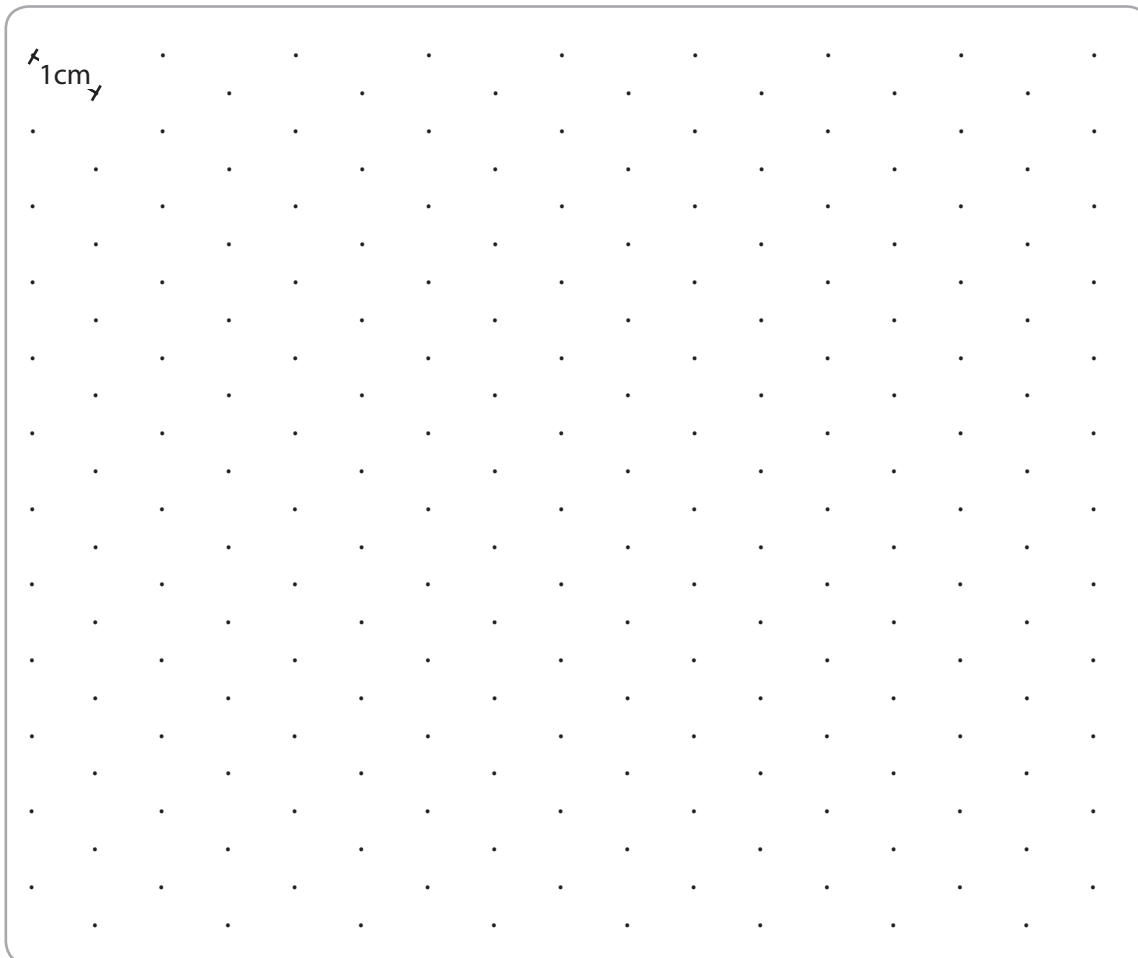
Nita designs a label for the jars of honey in the shape of honeycomb.
The shape of the label is a hexagon.

The label has equal sides of 3 cm.

- (a) Draw the label for Nita.

(2)

Draw your label on the triangular dotty paper below.



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Nita uses wax from the bees to make candles.
She wants to label the candles with the mean average time they take to burn.

Nita burns 6 of her candles.
The table shows the time it takes for each candle to burn.

candle 1	465 mins
candle 2	385 mins
candle 3	467 mins
candle 4	414 mins
candle 5	439 mins
candle 6	472 mins

Nita thinks the mean average time is 450 mins.

(b) Is Nita correct?
Show why you think this.

(3)

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



Large empty box for showing the calculation and reasoning.



Nita uses wax from the bees and oil to make face cream.

Nita has a face cream recipe that uses 1 part beeswax and 4 parts oil.

She wants to make 2000 ml of face cream.

(c) How much beeswax and how much oil should Nita use to make 2000 ml of face cream?

(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.

(Total for Question 7 is 8 marks)



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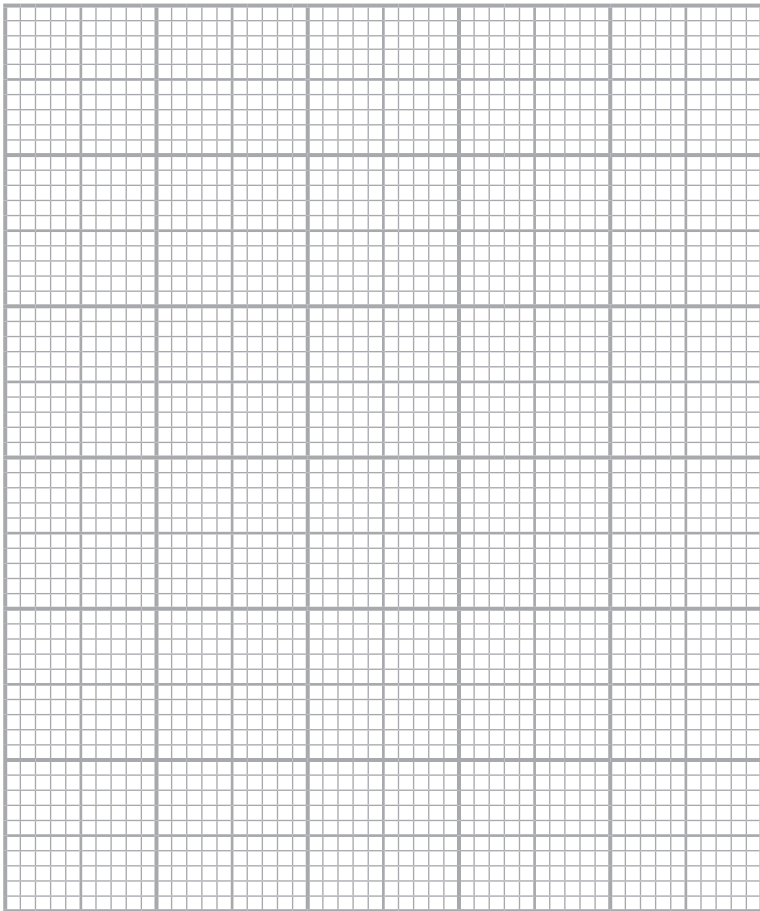
8 Nita visits schools to talk to children about bees.

She wants to draw a graph to show the importance of bees in the food chain.

Nita has this information.

Crop	% crop pollinated by bees
Almonds	100
Blueberries	90
Oranges	25
Apples	90

Draw a graph or chart for Nita. (3)

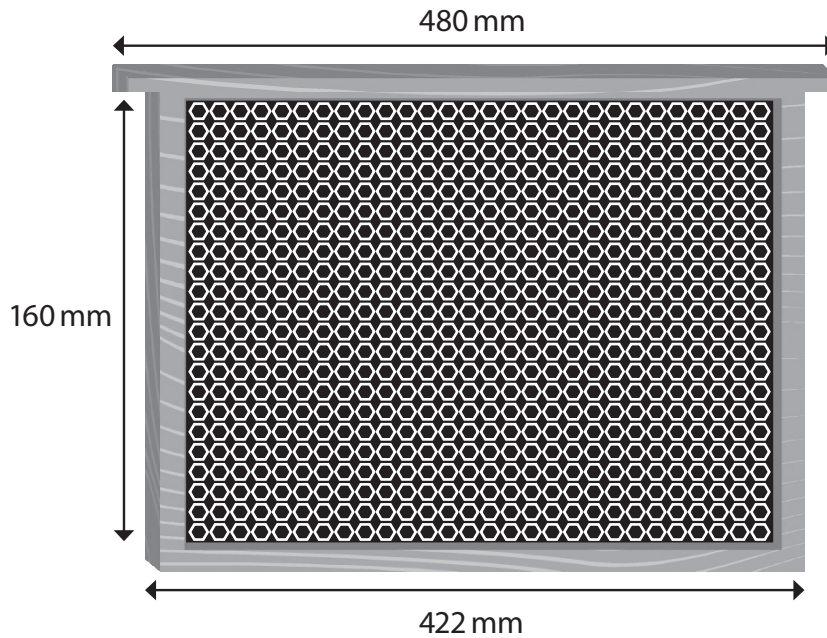


(Total for Question 8 is 3 marks)



9 Nita wants to make 2 honeycomb frames.

Each frame is made from 4 pieces of wood.
She draws a sketch of the front view of a frame.



Nita is going to use planks of wood to make the frames.

Each plank is 1.2 m long.

Nita thinks she needs 3 planks of wood to make 2 frames.

Is Nita correct?
Show why you think this.

(5)



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



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(Total for Question 9 is 5 marks)

TOTAL FOR PAPER IS 48 MARKS



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