Write your name here

Surname		Other names

Centre Number

Candidate Number

Mathematics

Level 1

2–6 February 2015
Time: 1 hour 30 minutes

Paper Reference
FSM01/01

Total Marks

You must have:
Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, compasses.

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 ▶

PEARSON

SECTION A: Moving house

Answer all questions in this section.

Write your answers in the spaces provided.

1 Enam is going to buy a house.

He makes a list of the costs.

House	£112 500
Solicitor	£594
Bank fee	£795
Legal searches	£207.70

(a) How much will it cost in total to buy the house?

(2)

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

The house price is £112 500

Enam is going to pay a deposit of 25% of the house price.

He has £29 300 in his savings account.

(b) Does Enam have enough money in his savings account to pay the deposit?

(3)

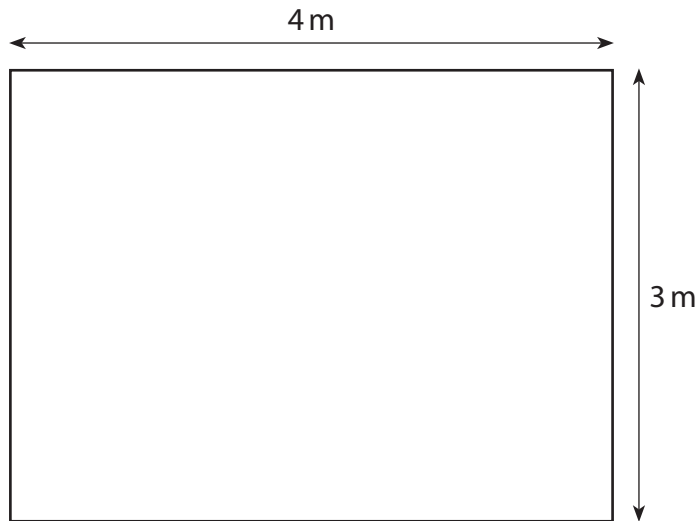Use the box below to show clearly how you get your answer.

(Total for Question 1 is 5 marks)

2 Enam wants to cover the floor of one room with tiles.
The room is rectangular 4 m by 3 m.

4 m

Diagram **NOT**
accurately drawn

3 m

A pack of floor tiles costs £23.70

Each pack covers 1 m² of floor.

Enam thinks it will cost less than £300 to buy the floor tiles for this room.

(a) Is Enam correct?
Show why you think this. **(3)**

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

Enam wants to put a new shower in his bathroom.

The space for the shower needs to be rectangular 120 cm by 80 cm.
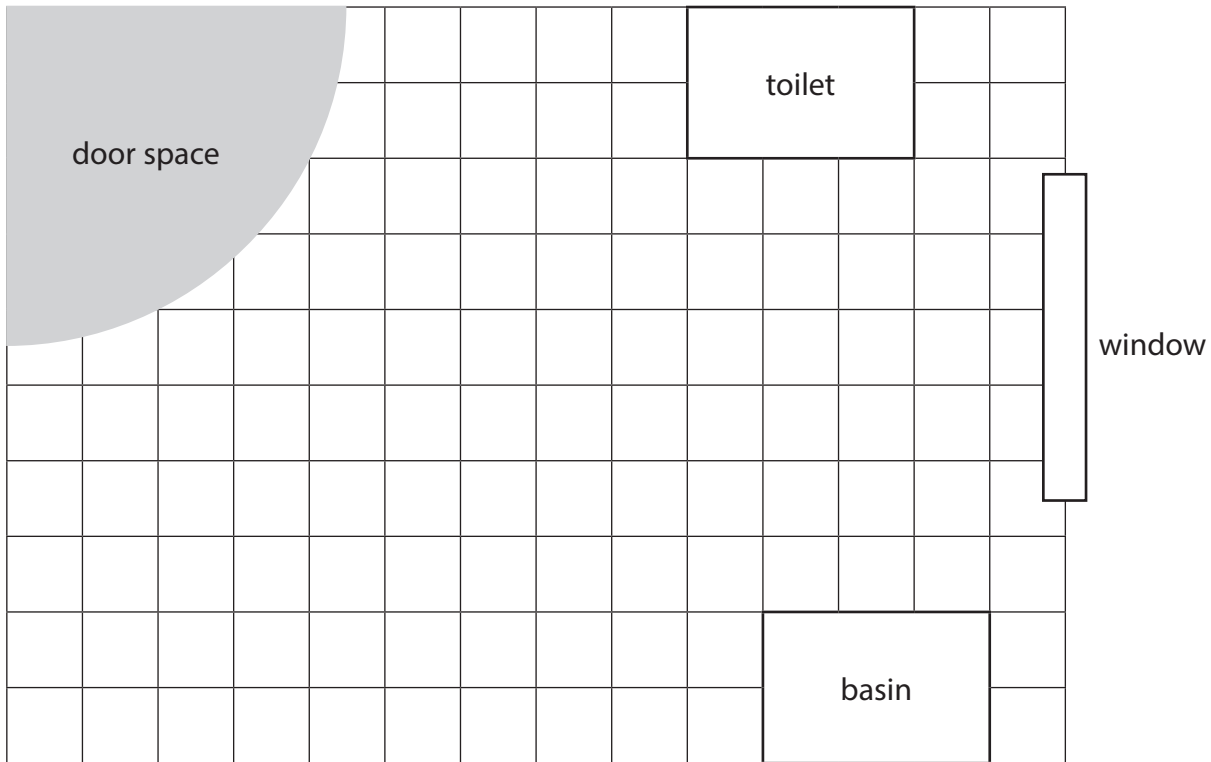
Enam knows the space for the shower must be

* placed against a wall
* at least 20 cm away from the window
* at least 40 cm from the basin.

The door space must be left empty.

Enam draws a plan of the bathroom on a grid.

(b) Draw the space for the shower on the grid.
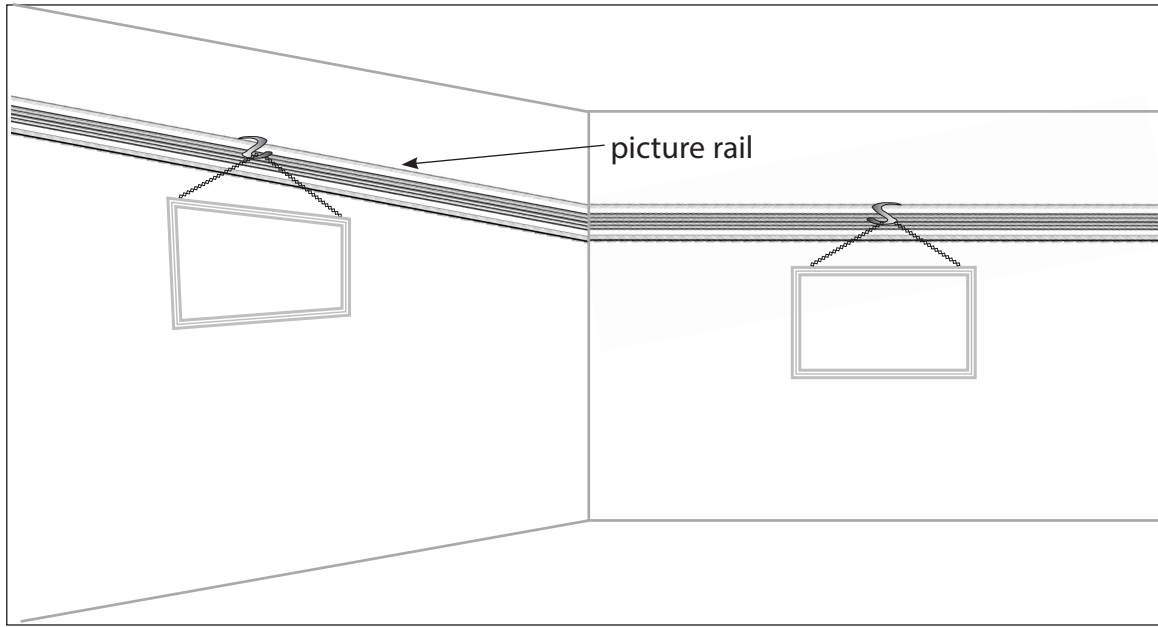   Remember to use the key.

(3)

Key: 1 square on the grid is 20 cm x 20 cm in the shower room.

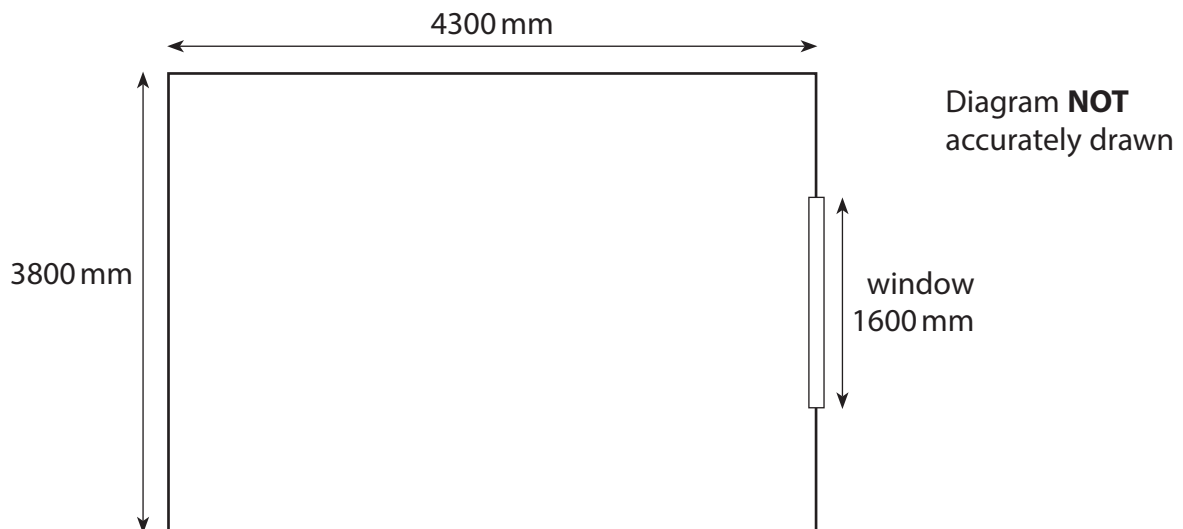**(Total for Question 2 is 6 marks)**

3 Enam wants to put up a picture rail in the lounge to hang some pictures.

picture rail

Enam draws a sketch of his lounge.

The lounge is rectangular.

Enam marks the lengths of the walls and the width of the window on the sketch.

4300 mm

Diagram **NOT** accurately drawn

3800 mm

window
1600 mm

The picture rail must

- go around all four walls
- not go over the window.

Enam buys 5 packs of picture rail.
There are 3 metres of picture rail in each pack.

Does Enam have enough picture rail for the lounge?

(5)

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

(Total for Question 3 is 5 marks)

SECTION B: Trip to Paris

Answer all questions in this section.

Write your answers in the spaces provided.

4   Ms Kennedy plans to take a group of students on a trip to Paris.

She finds this information on the internet.

	Cost per student – Paris			
	Month of travel			
Number of days	**April**	**May**	**June**	**July**
2	£135	£147	£165	£173
3	£169	£185	£199	£210
4	£195	£209	£228	£239
5	£219	£240	£267	£275

Ms Kennedy wants to run the trip for 4 days in June.

(a) What is the cost of the trip per student?

(1)

Write your answer in the box below.

There are going to be 5 teachers on the trip.

The travel company has this offer.

> **1 free place for teachers for every 8 students**

45 students are going on the trip.

(b) Will there be 5 free places for teachers?

(2)

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

Ms Kennedy needs to buy a first aid kit for the trip.
The first aid kit costs £24.93 from an online store.
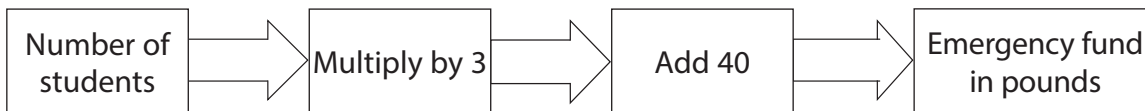
The store offers $\frac{1}{3}$ off for teachers.

(c) How much money does Ms Kennedy save with the offer?

(2)

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

Ms Kennedy has to take an emergency fund on the trip.
She uses the rule below to calculate the amount she needs for the emergency fund.

| Number of students | → | Multiply by 3 | → | Add 40 | → | Emergency fund in pounds |

45 students are going on the trip.
Ms Kennedy thinks the emergency fund will be less than £200

(d) Is Ms Kennedy correct?
Show why you think this.

(3)

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

(Total for Question 4 is 8 marks)

5 Ms Kennedy arranges a picnic lunch during the trip.

> **Picnic options**
>
> cheese sandwich **or** tuna sandwich **or** ham sandwich
>
> apple **or** grapes
>
> water **or** orange juice

Ms Kennedy wants a data collection sheet to record the choices for each student.
She wants 1 sheet for each group of 5 students.

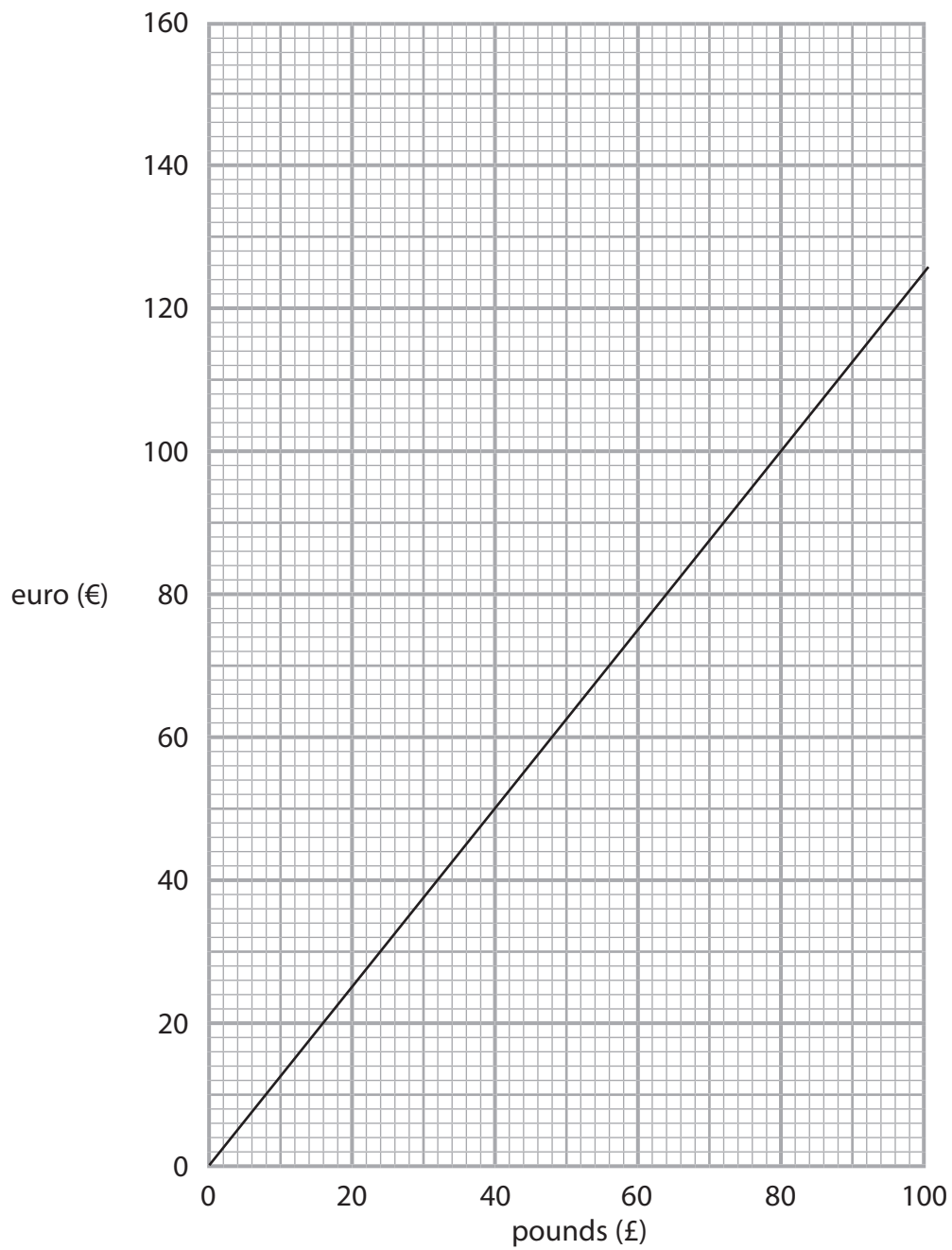It must show the name of each student and their choice of sandwich, fruit and drink.

(a) Design a data collection sheet for a group of 5 students for Ms Kennedy.

(3)

Use the box below for your data collection sheet.

Turn over ▶

Ms Kennedy uses this graph to convert £75 to euros (€).

(b) Use the graph to convert £75 to euros.

(2)

Write your answer in the box below.

(Total for Question 5 is 5 marks)

P43659A01220

6 They are going to Paris by coach and ferry.

Ms Kennedy needs to book the ferry.

She knows that

- the coach is going to leave at 7.45 am
- the journey to the ferry will take 4 hours
- they need to stop for at least 30 minutes at a service station
- they must arrive at the ferry at least 1 hour before it sails.

The timetable shows the times the ferry sails.

0800	0855	0950	1045	1130	1220
1305	1415	1505	1600	1655	1745

What time is the earliest ferry Ms Kennedy can book?

(3)

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

(Total for Question 6 is 3 marks)

Section C: Making soap

Answer all questions in this section.

Write your answers in the spaces provided.

7 Kate has a small business.
She makes and sells soap.

Kate needs to make 40 bars of lavender soap.

> For 1 bar of lavender soap
> - bath butter 35 g
> - white soap base 50 g
> - clear soap base 10 g
> - a few drops of coloured dye
> - 2 ml lavender oil and 1 ml camomile oil

Kate has 930 g of bath butter and 2 kg of white soap base.
She has plenty of all the other ingredients.

Kate thinks she needs more bath butter and more white soap base for 40 bars.

> Does Kate need more bath butter?
> Does Kate need more white soap base?   **(5)**

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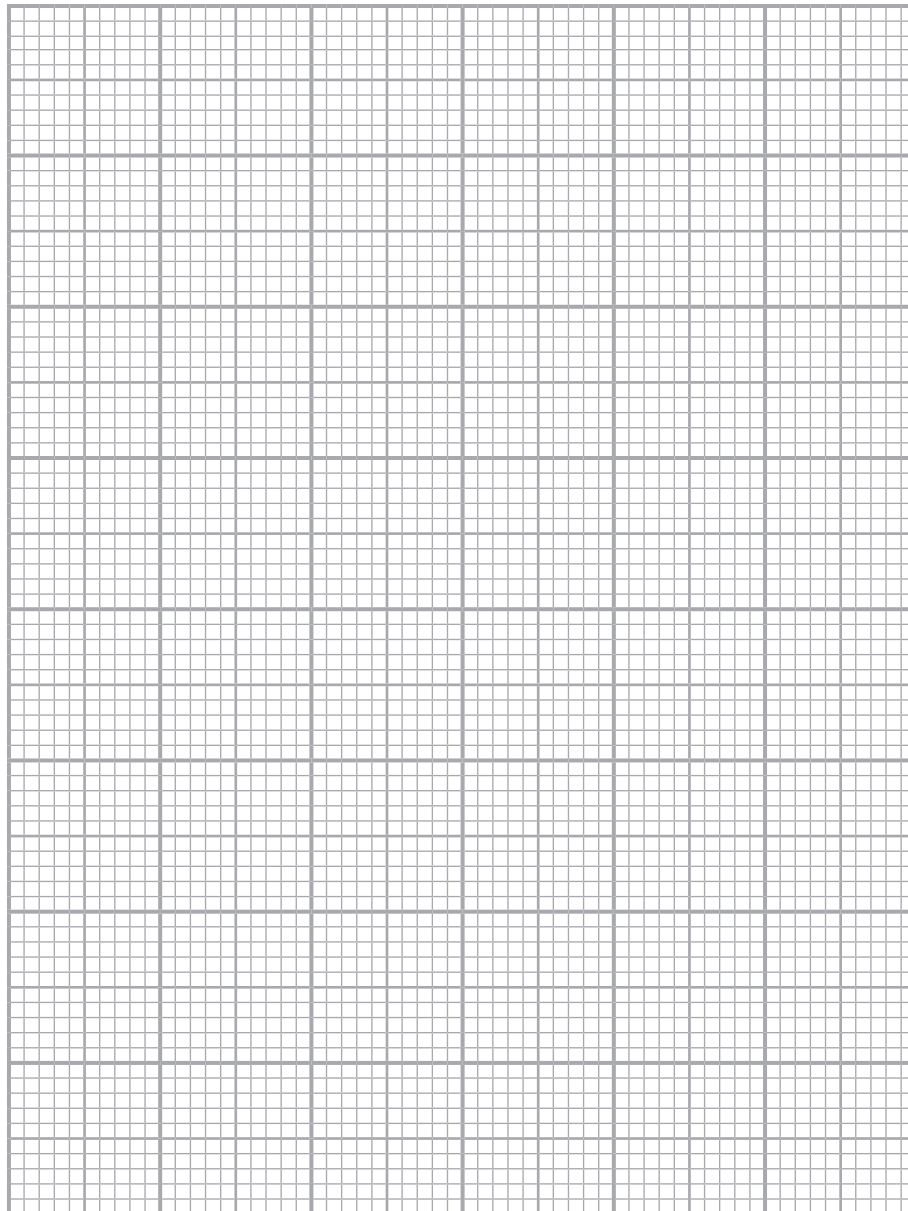DO NOT WRITE IN THIS AREA
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Use the box below to show clearly how you get your answer.

(Total for Question 7 is 5 marks)

P 4 3 6 5 9 A 0 1 5 2 0

8 Kate wants to get a loan from the bank for her business.
The table shows her profits over the last 4 months.

Month	October	November	December	January
Profit	£900	£1400	£2300	£1100

Kate wants a graph or chart to display this information for a meeting at the bank.

(a) Make a chart or graph for Kate.

(3)

Kate needs to make a comment about her profits.
Here is the table showing her profits.

Month	October	November	December	January
Profit	£900	£1400	£2300	£1100

(b) Write a comment for Kate about her profits from October to January.

(1)

Write your comment in the box below.

Kate says her mean average monthly profits were more than £1400

(c) Is Kate correct?
Show why you think this.

(3)

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

(Total for Question 8 is 7 marks)

Turn over ▶

9 Kate wants to buy a new van for her business.
The garage offers two different deals.

Cash Deal

Pay £11 997 today

Pay Monthly Deal

Pay £410 per month
for 36 months

What is the difference in the cost of these two deals?
You must show how you check your working.

(4)

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

Use the box below to show clearly how you check your working.

(Total for Question 9 is 4 marks)

TOTAL FOR PAPER IS 48 MARKS

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