Write your name here

Surname		Other names

Edexcel GCSE

Centre Number

Candidate Number

Mathematics B
Unit 1: Statistics and Probability (Calculator)

Foundation Tier

Tuesday 6 November 2012 – Morning
Time: 1 hour 15 minutes

Paper Reference
5MB1F/01

Total Marks

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

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.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.
- **Calculators may be used.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The total mark for this paper is 60
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*****) are ones where the quality of your written communication will be assessed.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.
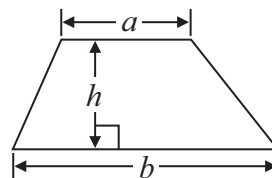
Turn over ▶

P40666A0120

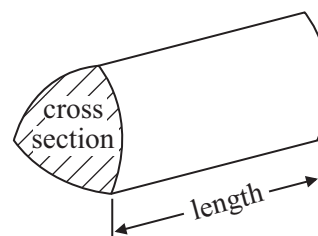**PEARSON**

GCSE Mathematics 2MB01

Formulae: Foundation Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

Area of trapezium = $\frac{1}{2}(a + b)h$

Volume of prism = area of cross section × length

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1   The table shows information about some items for sale in a clothes shop.

Item	Size	Colour	Price
Dress	large	red	£28
Trousers	medium	black	£19
Shirt	medium	red	£15
Blouse	large	white	£12
Shorts	small	blue	£16
Fleece	extra large	red	£23

(a) Write down the colour of the blouse.

....
   (1)

(b) Write down the size of the cheapest item that is red.

....
   (1)

Kate bought the dress and the shirt.

(c) Work out the total cost.

£ ....
   (1)

(Total for Question 1 is 3 marks)

2 This pictogram gives information about the numbers of bunches of roses Graham sold on Monday, on Tuesday and on Wednesday.

Monday	
Tuesday	
Wednesday	
Thursday	

Key:

represents 8 bunches of roses

(a) Write down the number of bunches of roses Graham sold on Monday.

....
(1)

(b) Write down the number of bunches of roses Graham sold on Tuesday.

....
(1)

On Thursday Graham sold 6 more bunches of roses than he sold on Wednesday.

(c) Complete the pictogram for Thursday.

(2)

(Total for Question 2 is 4 marks)

3 Erin is going on holiday.

When she gets to the airport she looks at the clock.
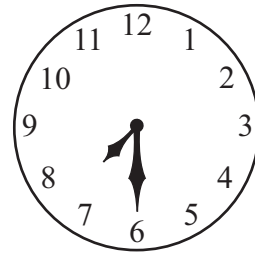
(a) (i) Write down the time shown on the clock.

....

Erin's plane will leave at 9.26 am.

(ii) How long will Erin have to wait until her plane leaves?

....
(3)

Erin's suitcase is weighed at the check-in desk.

The scales show the weight of her suitcase.

8 kg   9 kg
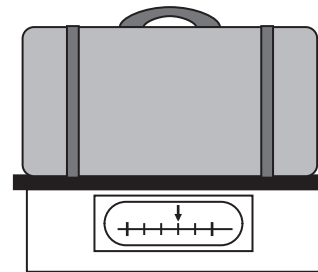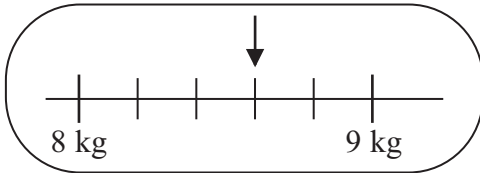
(b) Write down this weight.

.... kg
(1)

(Total for Question 3 is 4 marks)

Turn over ▶

4 Jessie wants to find out the colours of some cars in a car park.

Design a suitable table for a data collection sheet she could use.

(Total for Question 4 is 3 marks)

5 Calculators cost £3.85 each.

Charlie has £30
She wants to buy as many of these calculators as possible.

Work out how many calculators Charlie can buy.

....

(Total for Question 5 is 2 marks)

6 (a) On the probability scale below, mark with a cross (×) the probability that a woman has 20 sisters.

```
 ┌──────────────────┬──────────────────┐
 0                  1                  1
                    ─
                    2
```
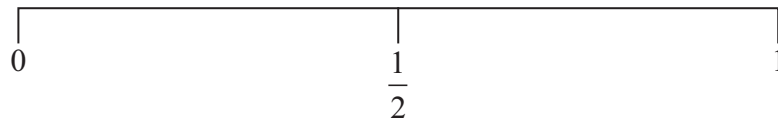
(1)

There are 6 red beads and 3 green beads in a tin.
Adam takes at random 1 bead from the tin.

(b) On the probability scale below, mark with a cross (×) the probability that Adam takes a red bead.

```
 ┌──────────────────┬──────────────────┐
 0                  1                  1
                    ─
                    2
```

(1)
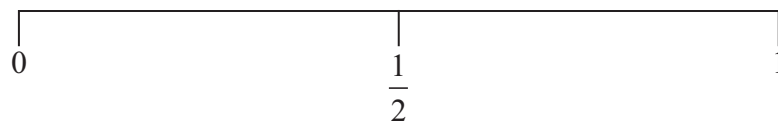
(Total for Question 6 is 2 marks)

*7 14 students did a history test.

Here are the results.

Girls	3	8	2	4	3	4	4	6
Boys	3	6	3	3	1	4		

Adele says,
"The range of the girls' marks is 1 more than the range of the boys' marks."

Is Adele right?
You must show your working.

(Total for Question 7 is 3 marks)

8 Here is a lunch menu.

There is a choice of 2 starters.
There is also a choice of 3 main courses.

Lunch Menu			
Starter	*soup*	*pate*	
Main course	*lamb*	*beef*	*chicken*

Ethan is going to choose one starter and one main course.

Write down all the possible combinations Ethan can choose.

....

....

....

(Total for Question 8 is 2 marks)

9 Here are the ages, in years, of 18 children.

12	13	13	11	12	13
11	13	12	10	11	12
13	11	10	13	12	13

(a) Find the mode.

....

(1)

(b) Work out the median.

....

(2)

(Total for Question 9 is 3 marks)

10 Here are the ages, in years, of children at a party.

6   8   6   4   5   5   6   7   4   6

(a) Work out the mean.

.... years

(2)

At the party the children were given some sausages to eat.

The table shows information about the numbers of sausages the children ate.

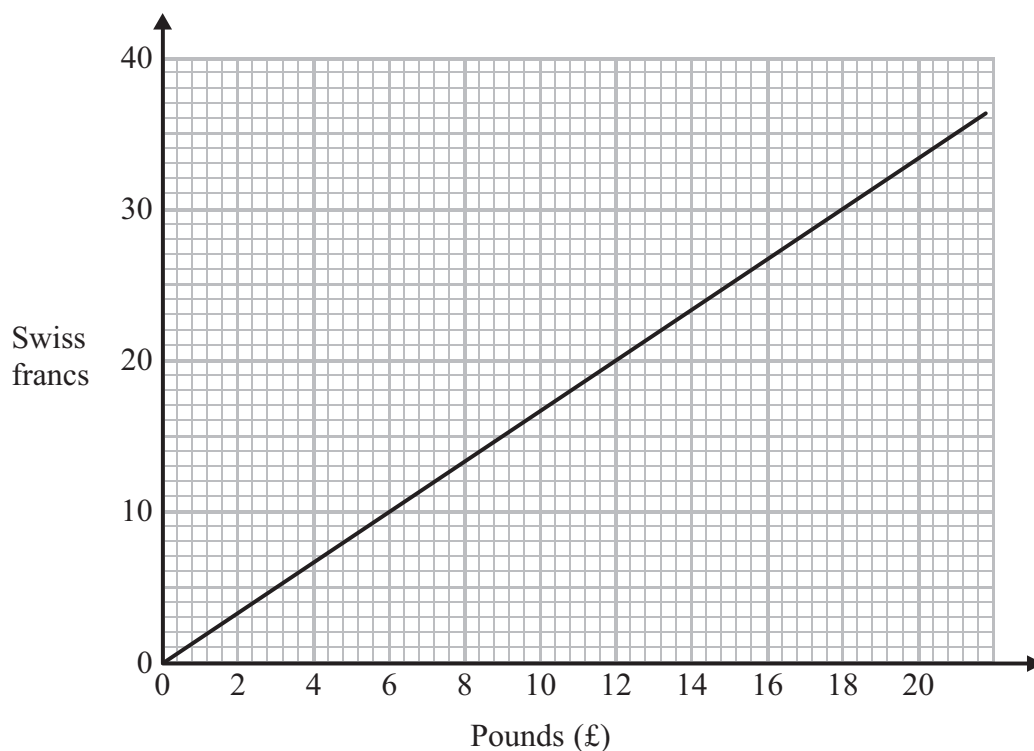| Number of sausages	1	2	3	4	5
Number of children	3	1	4	0	2

(b) Work out the total number of sausages the children ate.

.... sausages

(2)

(Total for Question 10 is 4 marks)

Turn over ▶

11 You can use this conversion graph to change between pounds (£) and Swiss francs.

Swiss francs

Pounds (£)

(a) Use the graph to change £6 to Swiss francs.

.... Swiss francs
(1)

(b) Use the graph to change 25 Swiss francs to pounds (£).

£ ....
(1)

(c) Change £64 to Swiss francs.

.... Swiss francs
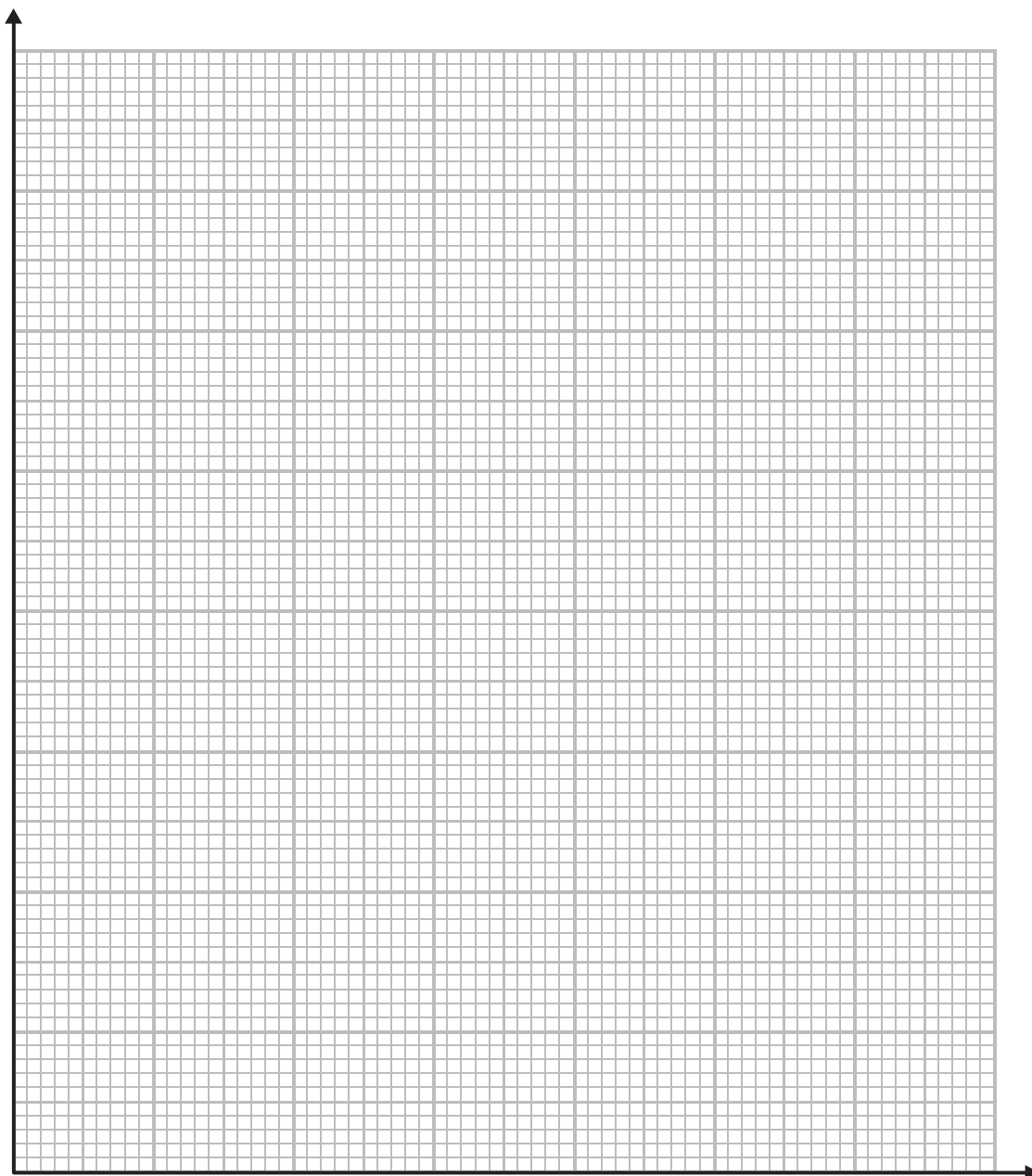**(2)**

(Total for Question 11 is 4 marks)

12 The table shows information about the favourite sport of some students.

Favourite sport	Men	Women
Hockey	3	6
Tennis	8	14
Football	15	7
Golf	9	1

On the grid, draw a suitable diagram to show this information.

(Total for Question 12 is 4 marks)

P 4 0 6 6 6 A 0 1 1 2 0

13 A chess club has two teams.

Last year the two teams played a total of 54 matches.

The two-way table shows some information about their results.

	Win	**Draw**	**Lose**	**Total**
Team A			3	
Team B	18		9	31
Total		14		54

Complete the two-way table.

(Total for Question 13 is 3 marks)

14 There are

      4 yellow crayons
      5 red crayons
      3 green crayons

in a box.

Jan takes at random a crayon from the box.

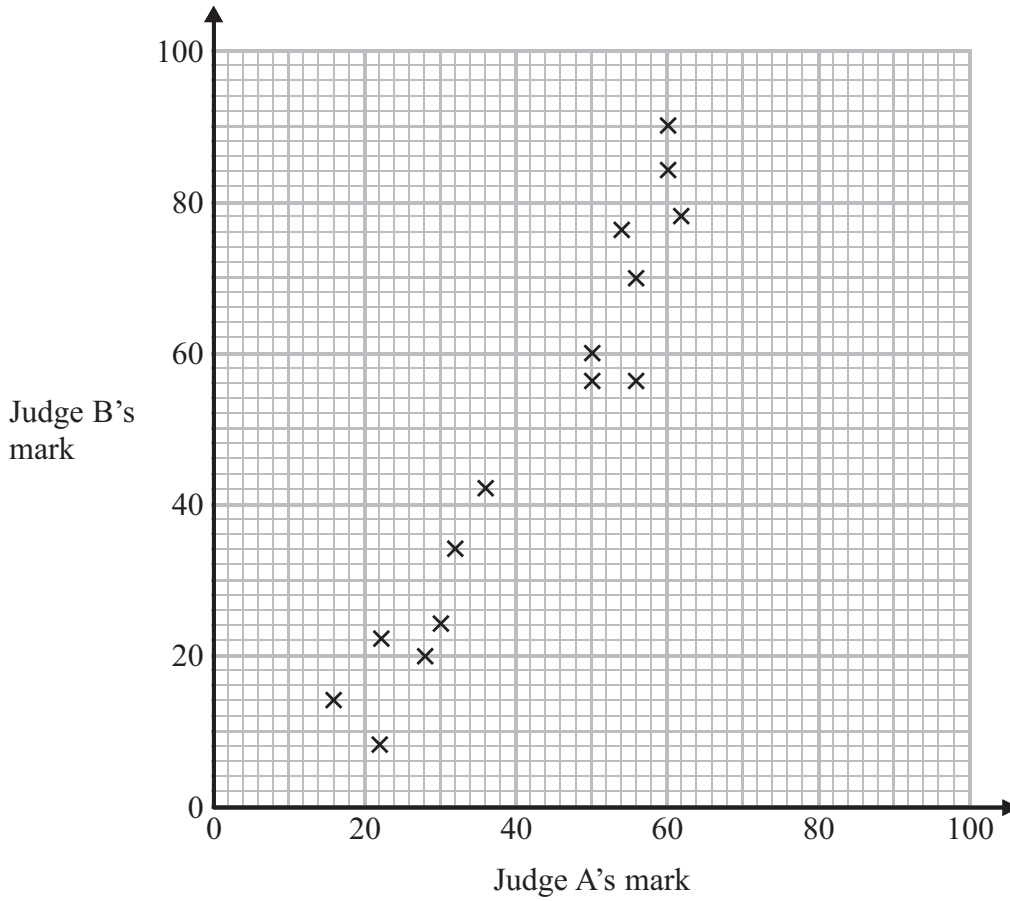Write down the probability that the crayon is green.

....

(Total for Question 14 is 2 marks)

15 Some children took part in a piano competition.

Each child was given a mark from Judge A and from Judge B.

The scatter graph below shows some of this information.

(a) Describe the correlation.

....
(1)

Judge A gives 44 marks to another child.

(b) Use the scatter graph to estimate Judge B's mark for this child.

.... marks
(2)

(Total for Question 15 is 3 marks)

Turn over ▶

16. The list below shows the weight, in grams, of 15 baskets of strawberries.

193	200	207	211	198
189	218	195	206	189
223	190	207	205	212

Show this information in an ordered stem and leaf diagram.
You must include a key.
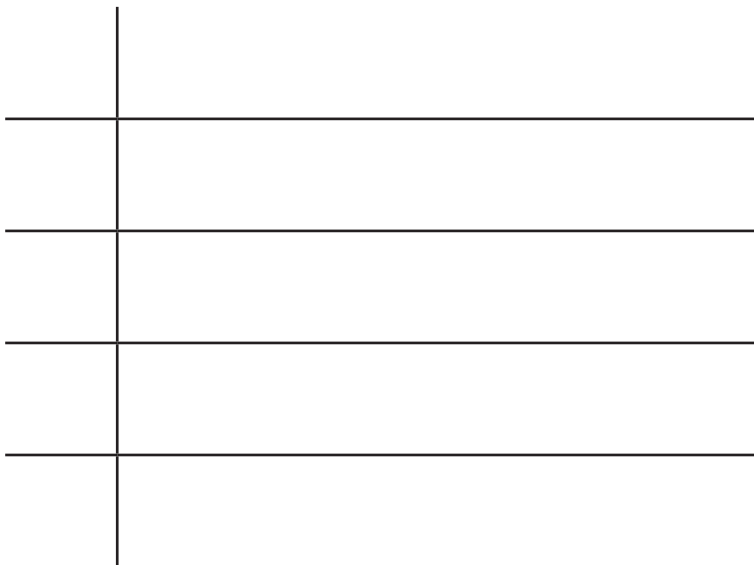
Key:

(Total for Question 16 is 3 marks)

17 Nathan wants to find out how many DVDs people have.

He writes this question on a questionnaire.

How many DVDs do you have?

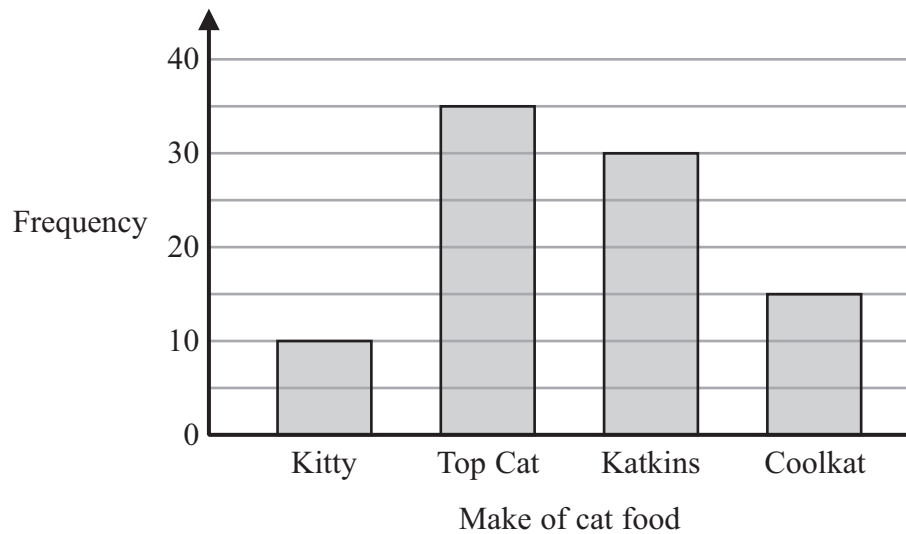☐   ☐   ☐   ☐

0 to 5   5 to 10   11 to 15   16 to 20

Write down **two** things wrong with this question.

1 ....

....

2 ....

....

(Total for Question 17 is 2 marks)

18 A survey was carried out for a magazine.
90 cat owners were asked to write down the make of cat food their cats liked best.

The bar chart shows information about the results.

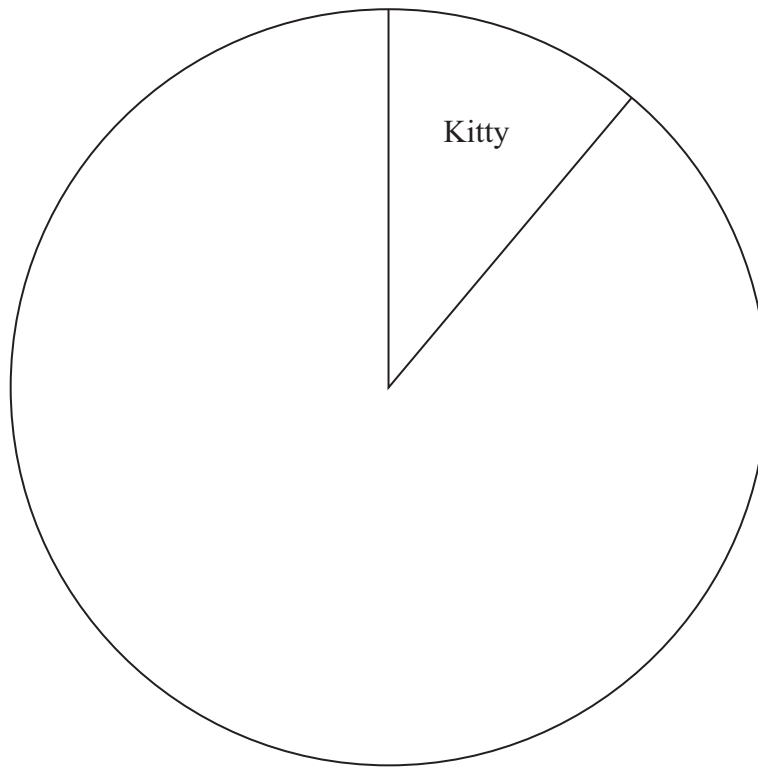This statement was in the magazine.

'1 out of 6 cats like Coolkat best'.

(a) Is the statement right?
You must explain your answer.

....

....

....

(1)

The information in the bar chart is going to be shown in a pie chart.

(b) Use the information in the bar chart to complete the pie chart.

Kitty

(3)

(Total for Question 18 is 4 marks)

Turn over ▶

*19 Joan is planning a skiing holiday in Hinterglemm for herself and her two children.
They are going skiing for 6 days.

The table shows the costs of ski hire, of boot hire and of buying lift passes in two shops in Hinterglemm.
All prices are in Euros.

Shop A

		Ski hire	Boot hire	Lift pass
Adult	6 days	111	53	236
	13 days	168	90	314
Child	6 days	78	52	165
	13 days	122	87	210

Shop B

		Ski hire	Boot hire	Lift pass
Adult	6 days	108	54	242
	13 days	170	89	324
Child	6 days	68	48	160
	13 days	118	85	205

Joan will use her own skis and her own boots.

For 6 days she will need

to hire skis for each of her two children
to hire boots for each of her two children
and   to buy lift passes for herself and each of her two children.

Shop A gives 5% off the total cost.
Shop B gives 3% off the total cost.

Joan wants to hire the skis and boots and buy the lift passes from the same shop.
She wants to get everything from the cheaper shop.

Which shop is cheaper for Joan?
You must show all your working.

(Total for Question 19 is 5 marks)

TOTAL FOR PAPER IS 60 MARKS

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