Write your name here

Surname	Other names

Pearson Edexcel
Functional Skills

Centre Number	Candidate Number

Mathematics

Level 1

9 – 13 October 2017
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.*
- **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.**
- **This sign shows where marks will be awarded for showing your check.**

Advice

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

Turn over ▶

P 5 5 9 5 2 A 0 1 2 0

Pearson

Answer all questions in this section.

Write your answers in the spaces provided.

1 Veronica and her 2 children are going to visit a skyscraper called SkyPoint.
The children are aged 8 and 10

Veronica plans to visit SkyPoint on a Thursday with her 2 children.

She finds these ticket prices.

	price on the day (Mon – Fri)	**price on the day (Sat and Sun)**	**price online (Mon – Sun)**
adult	£31	£35	£25.95
student	£26	£30	£20.95
child (aged 4–15)	£24	£28	£19.95

Veronica wants to know the total amount she will save if she buys tickets online instead of on the day of the visit.

How much will Veronica save in total if she buys the tickets online?

(4)

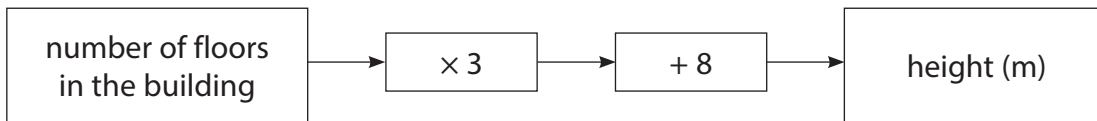Use the box below to show clearly how you get your answer.

(Total for Question 1 is 4 marks)

2 Veronica looks for information about SkyPoint before the visit.

She finds that SkyPoint has 96 floors and a height of 310 m.

Veronica finds this formula to work out the height of a building from the number of floors.

| number of floors in the building | → | × 3 | → | + 8 | → | height (m) |

(a) Does this formula give the correct height for SkyPoint?

(3)

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

P 5 5 9 5 2 A 0 4 2 0

Veronica reads that 64 out of the 96 floors in SkyPoint are used for apartments.

She tells her children

'three quarters of the floors in SkyPoint are used for apartments'.
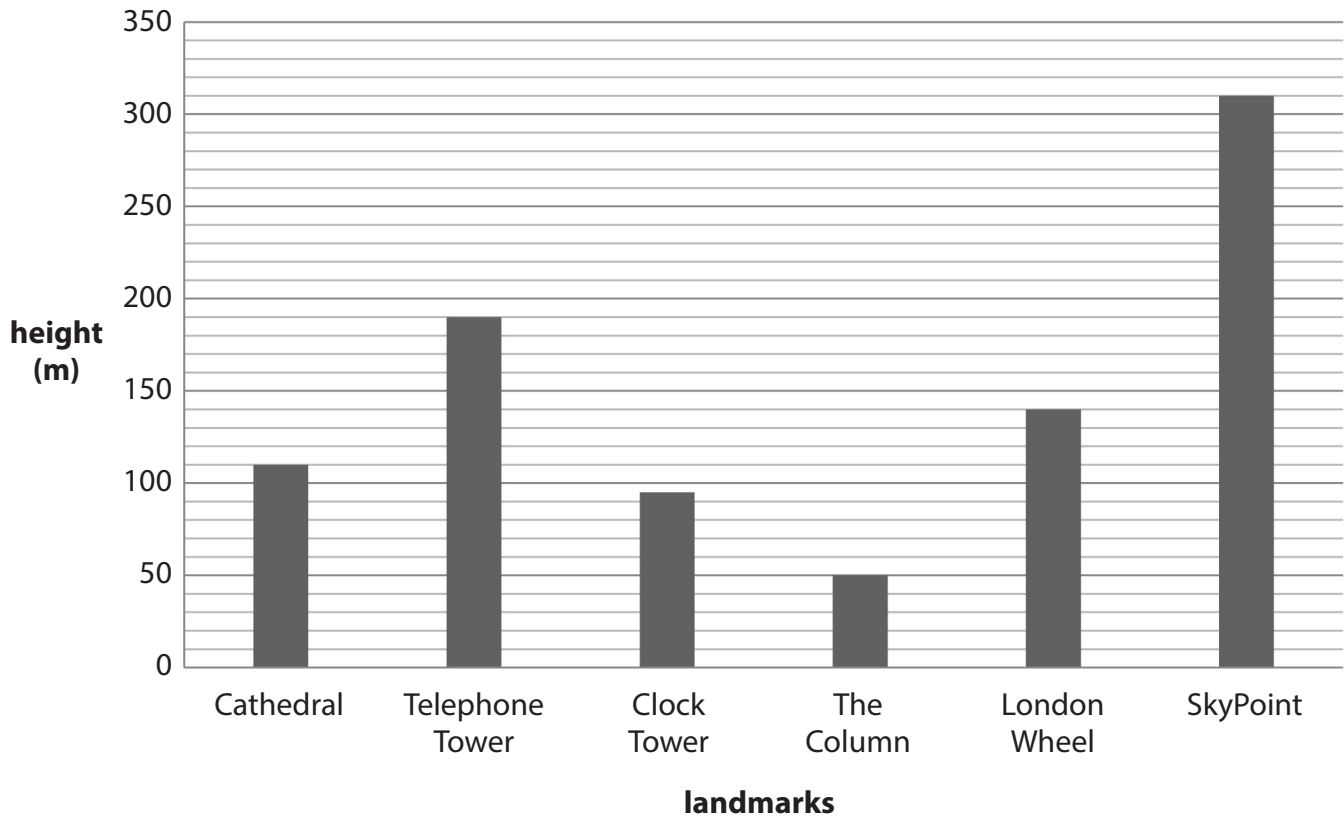
(b) Is Veronica correct?
Show why you think this.

(3)

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

P 5 5 9 5 2 A 0 5 2 0

Veronica shows her children this chart for the height of some landmarks.

Veronica says to her children

'the height of SkyPoint is more than 3 times the height of the Clock Tower'.

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

(3)

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

(Total for Question 2 is 9 marks)

3 Veronica reads that 800 000 people visited SkyPoint in 2016

SkyPoint was open every day in 2016

Work out the average number of people who visited SkyPoint each day in 2016
Show a check of your working. **(3)**

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

Use the box below to show your check.

☑

(Total for Question 3 is 3 marks)

Turn over ▶

SECTION B: The toy shop

Answer all questions in this section.

Write your answers in the spaces provided.

4 Romesh is going to open a toy shop.
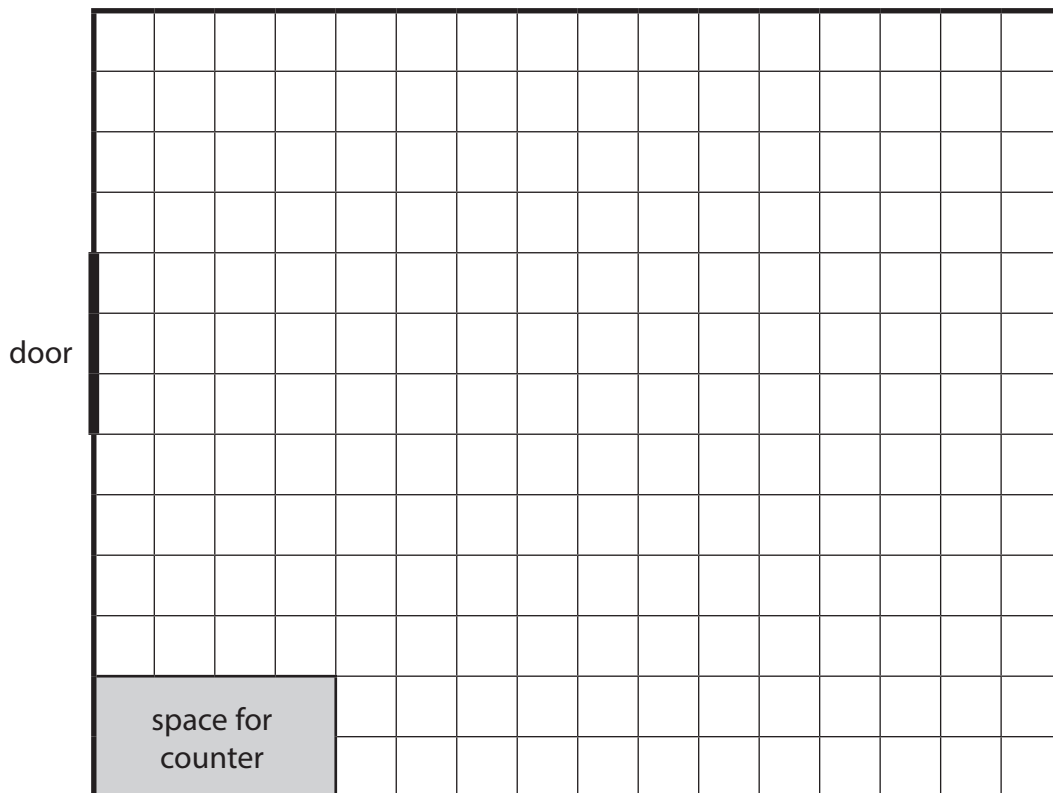He needs to plan where to put 2 shelving units in the shop.

Each shelving unit needs a rectangular floor space with width 100 cm and length 400 cm.

The shelving units must be at least
- 150 cm away from the counter and from the door
- 100 cm away from any wall.

There must be a gap of at least 100 cm between the 2 shelving units.

Romesh draws a plan of the floor space on a grid.

Key
1 square on the grid is 50 cm by 50 cm on the floor

_____ wall

(a) Draw a space for the 2 shelving units on the grid.
   Remember to use the key.

   (4)

8

Romesh buys a counter for his shop.
In the front of the counter there is a glass panel.

Diagram **not** drawn accurately

1250 mm

glass panel

wood panel

300 mm

1800 mm
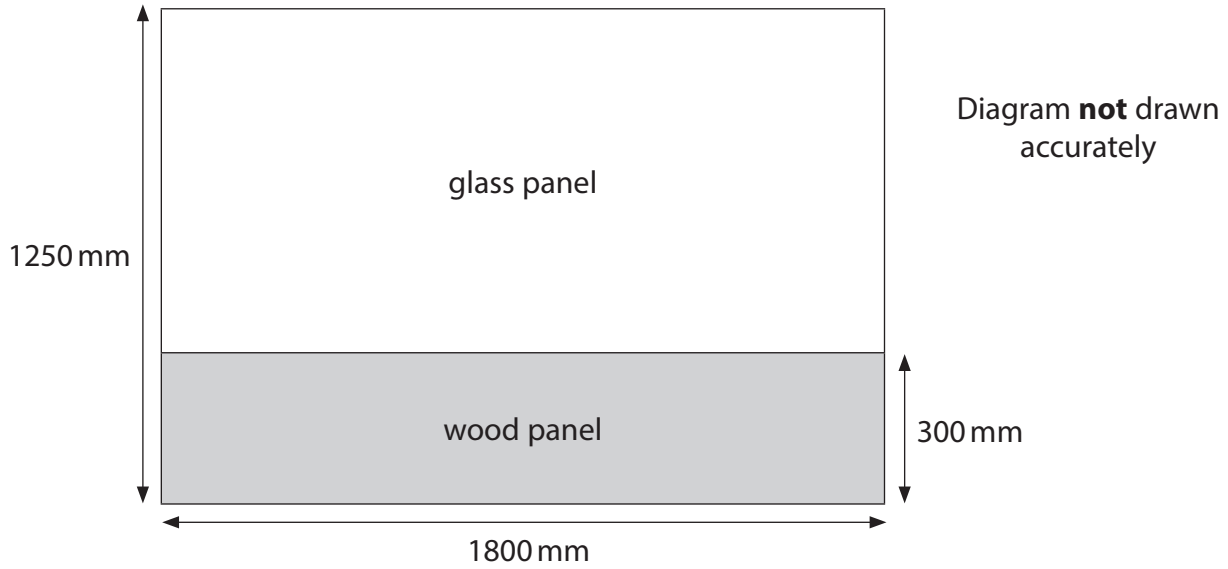
Romesh wants to put a length of lights around all 4 edges of the glass panel.

He can buy lights of length 4 m or 6 m or 8 m.

Romesh wants to buy the shortest length of lights to go around all 4 edges of the glass panel.

(b) Which length of lights should Romesh buy?
Show why you think this. **(4)**

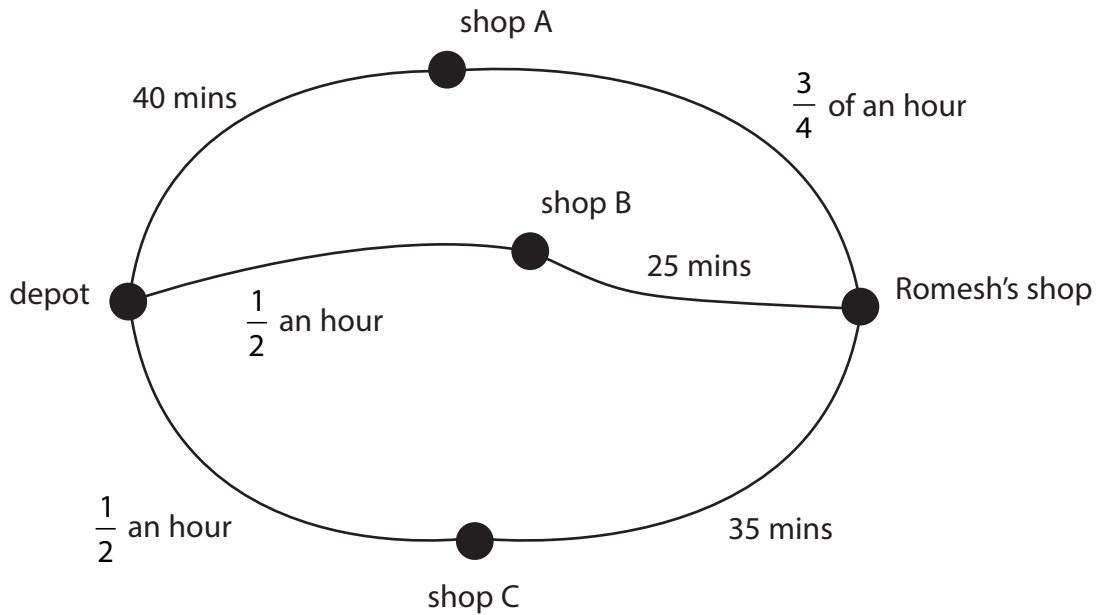Use the box below to show clearly how you get your answer.

(Total for Question 4 is 8 marks)

5 Sue delivers toys for a company.

One morning she is going to deliver toys to Romesh's shop.
Romesh asks if Sue can deliver the toys to his shop by 10 am.
On the same morning, Sue must also deliver toys to shop C.

She has this sketch to show the routes and driving times.

shop A

40 mins $\frac{3}{4}$ of an hour

shop B

25 mins

depot $\frac{1}{2}$ an hour   Romesh's shop

$\frac{1}{2}$ an hour   35 mins

shop C

Sue wants to deliver toys to shop C before she gets to Romesh's shop.

She will start from the depot at 8.30 am.
Sue needs to stop at shop C for 20 minutes.

Can Sue go to shop C, stop for 20 minutes and get to Romesh's shop by 10 am?

(4)

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

(Total for Question 5 is 4 marks)

6 Romesh is going to open his shop tomorrow.
He has 24 stickers in a bag.

There are

6 red stickers
6 blue stickers
6 yellow stickers and
6 green stickers.

Romesh plans to give a sticker to each child who comes into the shop.

He will pick a sticker out at random.

(a) How likely is it that Romesh will give a white sticker to the first child who comes into the shop tomorrow?

(1)

Tick (✓) one of the answers below.

impossible   **unlikely**   **evens chance**   **likely**   **certain**

( )   ( )   ( )   ( )   ( )

Tommy goes into the toy shop to buy a model car.

He sees this information on the box of the model car.

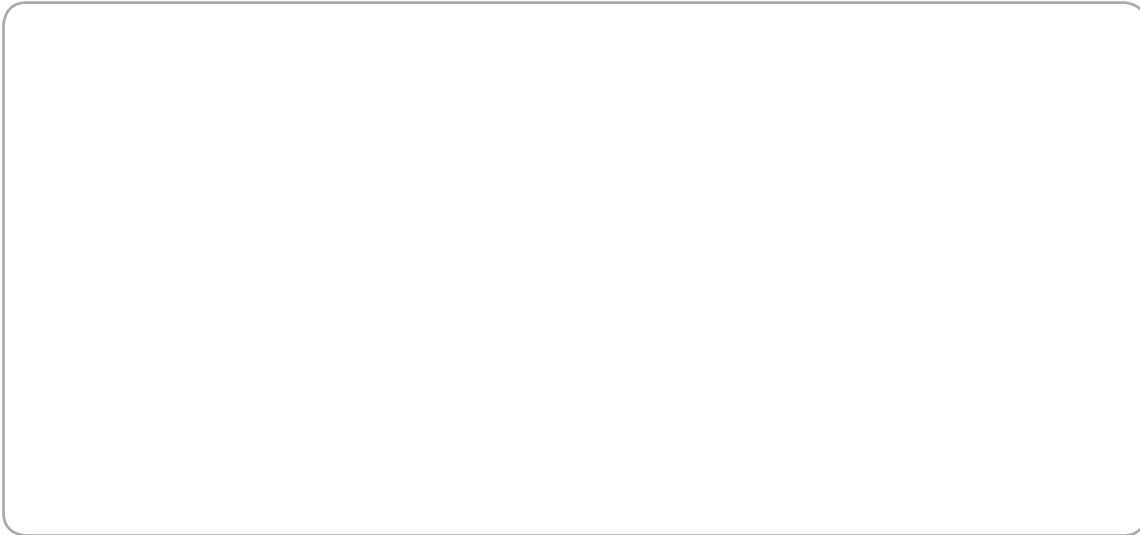Every 1 cm of length on the model car represents 18 cm of length on a real car.

The length of the model car is 25 cm.
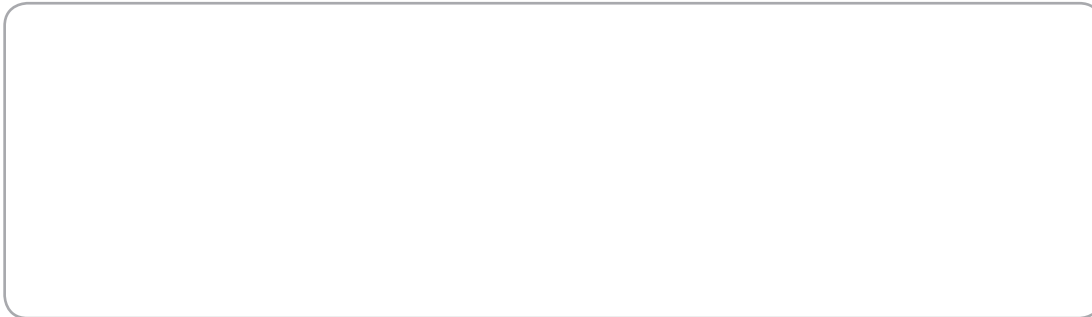Tommy wants to know the length of a real car.

(b) What is the length of a real car?
   Show a check of your working.

(3)

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

Use the box below to show your check.

☑

(Total for Question 6 is 4 marks)

Turn over ▶

DO NOT WRITE IN THIS AREA

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SECTION C: Living on a budget

Answer all questions in this section.

Write your answers in the spaces provided.

7 Ruth gets paid £160 every two weeks.

She keeps £30 of this amount to pay for household bills.

Ruth thinks that £30 is 20% of £160

(a) Is Ruth correct?
Show why you think this.

(2)

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

P55952A01420

Ruth works out she can spend a mean average of £3.70 each day.
She writes down what she actually spends on the next 5 days.

Mon	Tue	Wed	Thu	Fri
£2.48	£4.70	£4.66	£0	£5.81

Ruth wants to know if the mean average of the amount she has spent on these 5 days is less than £3.70

(b) Has Ruth spent less than a mean average of £3.70 a day?
Show a check of your answer.

(4)

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

Use the box below to show your check.

✓

(Total for Question 7 is 6 marks)

8 Ruth wants to grow her own vegetables to save money.
She has this information about some vegetables.

vegetable	distance between seeds (cm)	average soil temperature (°C)	number of days to grow
broccoli	45	20	61
cabbage	45	20	45
lettuce	30	19	25
onions	12	22	125
spinach	15	12	50
potato	50	16	70

(a) How many days does it take to grow lettuce?

(1)

Use the box below to show clearly your answer.

P55952A01620

Ruth wants to grow spinach.

She will plant 4 rows of spinach seeds in her garden.
Each row will be 110 cm long.

In each row the distance between
• spinach seeds must be 15 cm
• the end of the row and the first seed must be 10 cm
• the other end of the row and the last seed must be 10 cm.

(b) Work out how many seeds Ruth will plant in her garden.

(5)

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

(Total for Question 8 is 6 marks)

9 Ruth grows tomatoes.
She expects to get 6 kg of tomatoes from one plant.

Ruth uses a recipe to make 5 bowls of soup with 750 g of tomatoes.

She works out that the tomatoes from one plant would be enough to make a total of 45 bowls of this soup.

Is Ruth correct?
Show why you think this.

(4)

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

(Total for Question 9 is 4 marks)

TOTAL FOR PAPER IS 48 MARKS

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