Write your name here

Surname	Other names

Pearson Edexcel
Functional Skills

Centre Number

Candidate Number

Mathematics
Level 1

8 – 12 May 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 a **black** 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 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 ▶

Pearson

SECTION A: Using the train

Answer all questions in this section.

Write your answers in the spaces provided.

1   Sandro is going to London by train.
He gets a taxi from home to the station.

Sandro knows the taxi driver charges 80 pence for every mile.
The journey from Sandro's home is 9 miles in total.

Sandro thinks this journey will cost £7.50

> (a) Is Sandro correct?
> Show why you think this.   **(2)**

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

Sandro buys these items at the station.

Packet of crisps	£1.05
Bottle of water	£1.69
Sandwich	£3.49
Cup of tea	£1.95

Sandro pays with a £10 note.
He gets £1.35 in change.

> (b) Is this change correct?
> Show why you think this.   **(2)**

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

P 5 3 8 5 5 A 0 2 2 0

Sandro sees this poster at the station.

<div style="border:1px solid black;">

Super Trains

We did 4 732 000 journeys last year

90% were on time

</div>

(c) What is 90% of 4 732 000?
     Show a check of your answer.

(3)

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

Write your check in the box below.

☑

(Total for Question 1 is 7 marks)

2 Sandro wants to travel from London to Kidsgrove on Monday.
He has two options.

Option 1 Take the train from London to Crewe.
Then take the train from Crewe to Kidsgrove.

Option 2 Take the train from London to Stoke.
Then take the train from Stoke to Kidsgrove.

Sandro looks at these timetables.

London to Crewe trains depart at
17.40
18.07
18.33
18.40
19.07
It takes 1 hour and 35 mins to go from London to Crewe

London to Stoke trains depart at
17.00
17.20
18.00
18.20
19.00
It takes 1 hour and 24 mins to go from London to Stoke

Crewe to Kidsgrove trains depart at
18.07
19.02
19.07
20.10
20.45
It takes 13 mins to go from Crewe to Kidsgrove

Stoke to Kidsgrove trains depart at
18.34
18.59
19.34
19.59
20.34
It takes 8 mins to go from Stoke to Kidsgrove

Sandro knows he will get to the station in London at 17.25
He wants to get to Kidsgrove at the earliest possible time.

Sandro wants to make a time plan for his journey from London to Kidsgrove.
He wants to know for his journey the time each train

• departs
• arrives.

Make a time plan for Sandro.
Remember to check your time plan.   **(5)**

Write your time plan in the box below.

(Total for Question 2 is 5 marks)

3 Sonia works for Super Trains.
She has to display information about trains arriving on time.

Sonia has this information.

Month	Jan	Feb	Mar	Apr	May
Percentage of trains arriving on time	80	86	98	90	84

She wants to display this information in a graph or chart.

(a) Draw a graph or chart for Sonia.

(3)

Draw your graph or chart on the page opposite.

(b) Write a comment about the percentage of trains arriving on time in these five months.

(1)

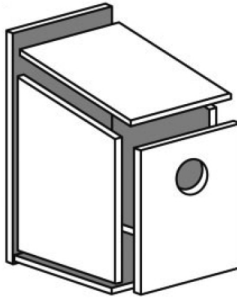Write your comment in the box below.

Draw your graph or chart below.
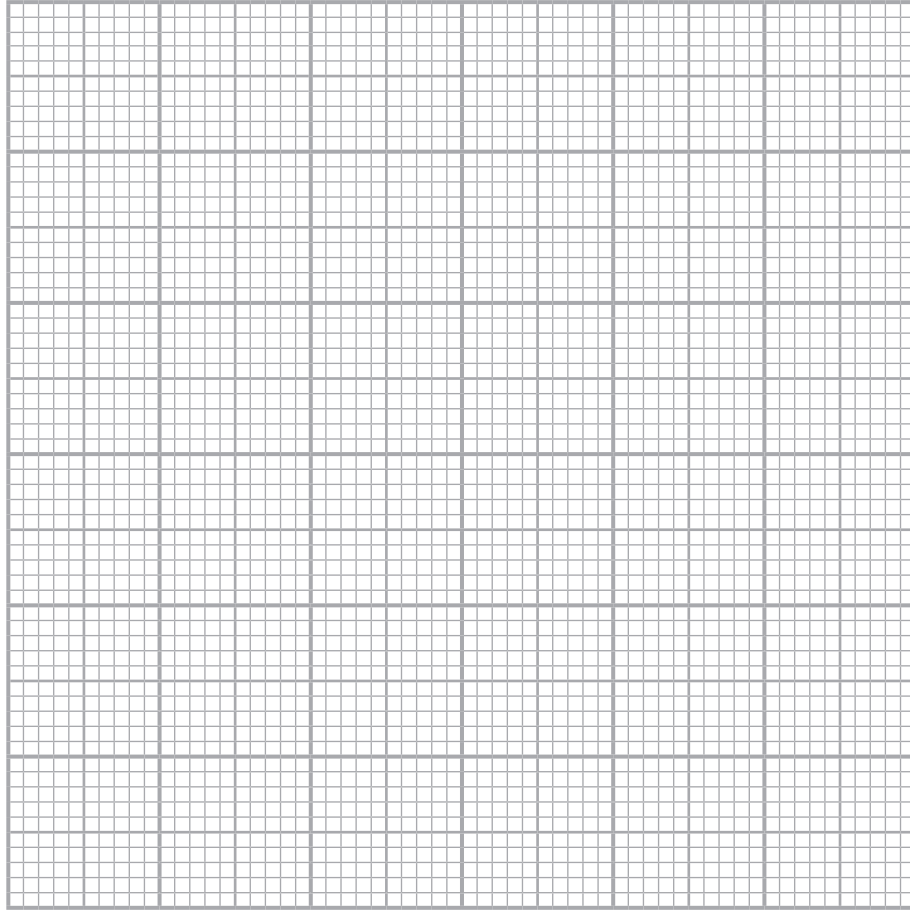
SECTION B: Garden birds

Answer all questions in this section.

Write your answers in the spaces provided.

4 Jon wants to attract birds to his garden.
He is going to make a small bird box.

Jon uses this sketch to help him make a bird box.

Jon knows this information about the hole on the front of the bird box.
The centre of the hole must be

• 150 mm from the bottom
• equal distances from the left edge and the right edge.

Jon wants to mark the centre of the hole on the front of the box to guide him.
He has drawn an accurate diagram of the front of the box on the opposite page.

(a) Mark, with a cross, the centre of the hole on the accurate diagram.

(2)

P 5 3 8 5 5 A 0 8 2 0

top

left edge

right edge

bottom
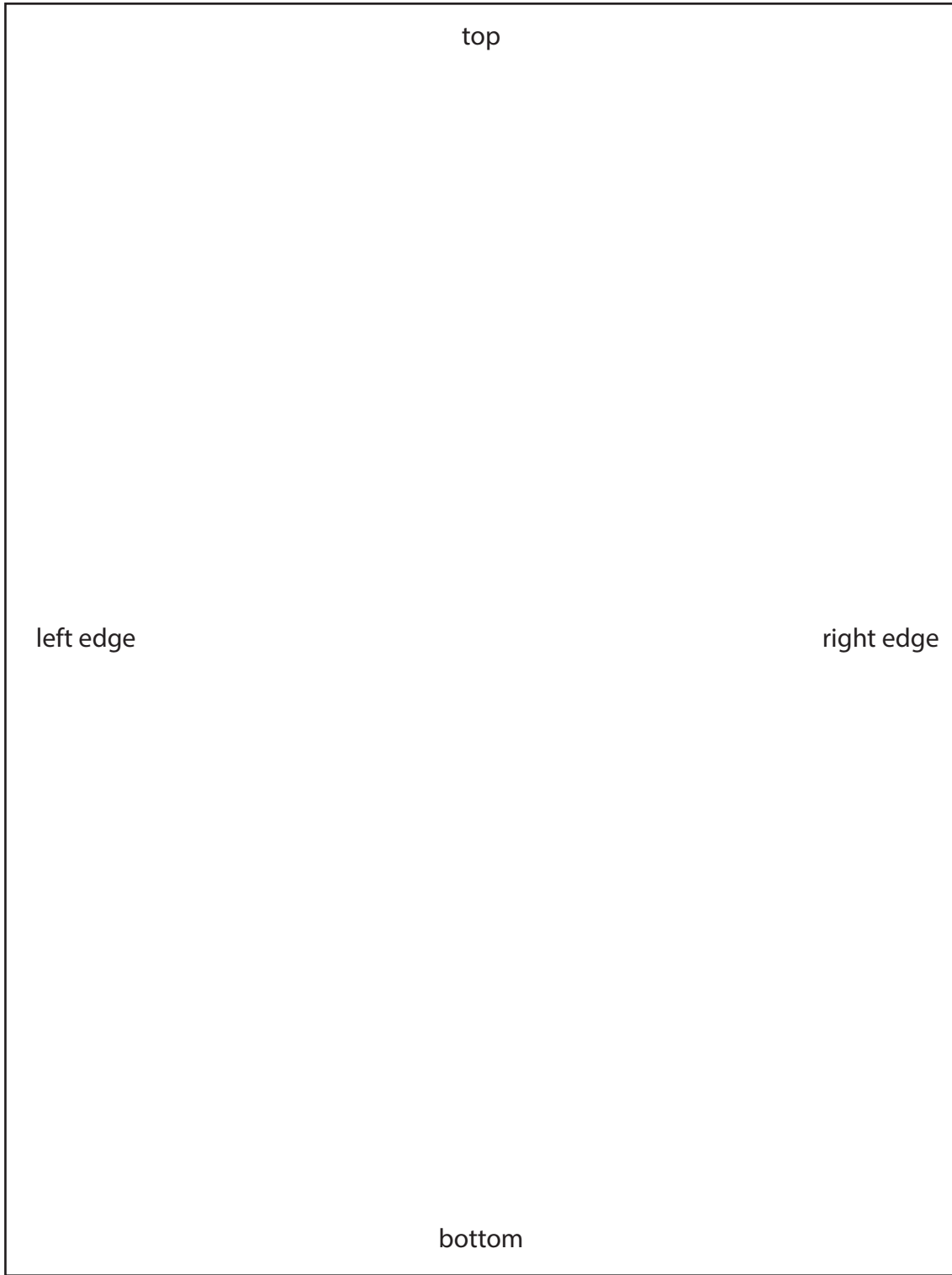
Jon finds this information about the measurements of the pieces of wood needed to make bird boxes.
He is going to make a small bird box.

	small bird box (mm)	large bird box (mm)
side a	150 , 250 , 200	180 , 250 , 300
side b	150 , 250 , 200	180 , 250 , 300
base	150 , 120	180 , 150
back	150 , 350	180 , 400
roof	150 , 200	180 , 230
front	150 , 200	180 , 250

The sides of the small bird box can be made from one piece of wood.

Jon draws this sketch.

_____ mm   _____ mm

150 mm   side a   side b   150 mm

200 mm   250 mm
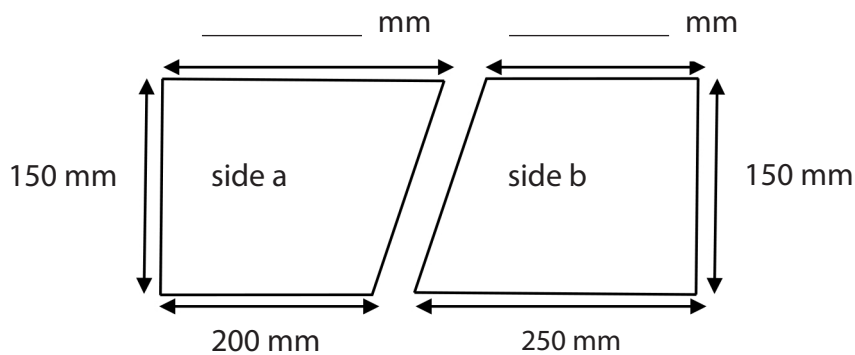
He wants to know the measurements of the two missing lengths on the sketch.

(b) Write the missing lengths on the sketch for Jon.

(1)

Jon has a piece of wood with width 150 mm and length 1.2 metres.

He knows he needs 450 mm of wood in total to make side a and side b.

Jon knows he can get some more wood with width 150 mm.

(c) What extra length of wood does Jon need to make the small bird box?

(4)

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P 5 3 8 5 5 A 0 1 0 2 0

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

(Total for Question 4 is 7 marks)

5   Jon sees this information on a bird watching website.

eight million, five hundred and forty six thousand, eight hundred and forty five birds were counted in 2015

eight million, two hundred and sixty two thousand, six hundred and sixty two birds were counted in 2016

Jon says the number of birds counted in 2016 is fewer than in 2015

(a)   How many birds fewer were counted in 2016 than in 2015?

(2)

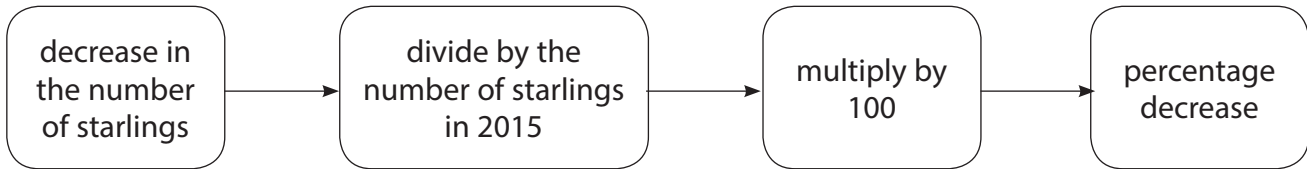Use the box below to show clearly how you get your answer.

Jon sees this information about starlings.

In 2015 there were 2 472 888 starlings.
In 2016 the number of starlings had decreased by 74 186

He uses this rule to calculate the percentage decrease.

| decrease in the number of starlings | → | divide by the number of starlings in 2015 | → | multiply by 100 | → | percentage decrease |

Jon thinks the percentage decrease in the number of starlings is 5%

(b) Is Jon correct?
Show why you think this. **(3)**

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

Rita works for the bird watch website.
She wants to write a blog about robins.

Rita finds this information about the number of robins counted in each region.

	NE	NW	W	E	SE	SW
Number of robins	8000	7500	8700	8200	7700	8200

(c) Calculate the mean average number of robins for Rita.
Show a check of your answer.

(4)

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

Write your check in the box below.

☑

(Total for Question 5 is 9 marks)

Turn over ▶

P 5 3 8 5 5 A 0 1 3 2 0

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

SECTION C: The bakery

Answer all questions in this section.

Write your answers in the spaces provided.

6 Jean is the manager of a bakery.
She finds this list of ingredients for fruit bread.

Fruit bread
500 g flour
14 g yeast
50 g sugar
50 g butter
250 g dried fruit
150 ml milk

Jean has a 15 kg bag of flour.
She wants to use all this flour.

(a) What weight of sugar must Jean use with this flour?
Show a check of your answer.

(4)

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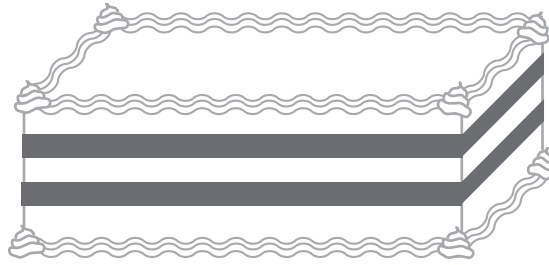
Write your check in the box below.

☑

Jean has baked a cake.
The cake is in the shape of a cuboid with length 25.5 cm and width 20 cm.

Jean has a ribbon with length 150 cm.
She wants to put the ribbon twice around this cake.

(b) Is this ribbon long enough to go twice around this cake?
Show why you think this.

(3)

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

(Total for Question 6 is 7 marks)

Turn over ▶

7 Jean gets orders for cupcakes from local shops and her website.
She needs to know how many of each type of cupcake to make.

Each cupcake is made from one flavour of sponge.
There are three flavours

- vanilla
- lemon
- chocolate.

Each cupcake is decorated with one colour of butter cream.
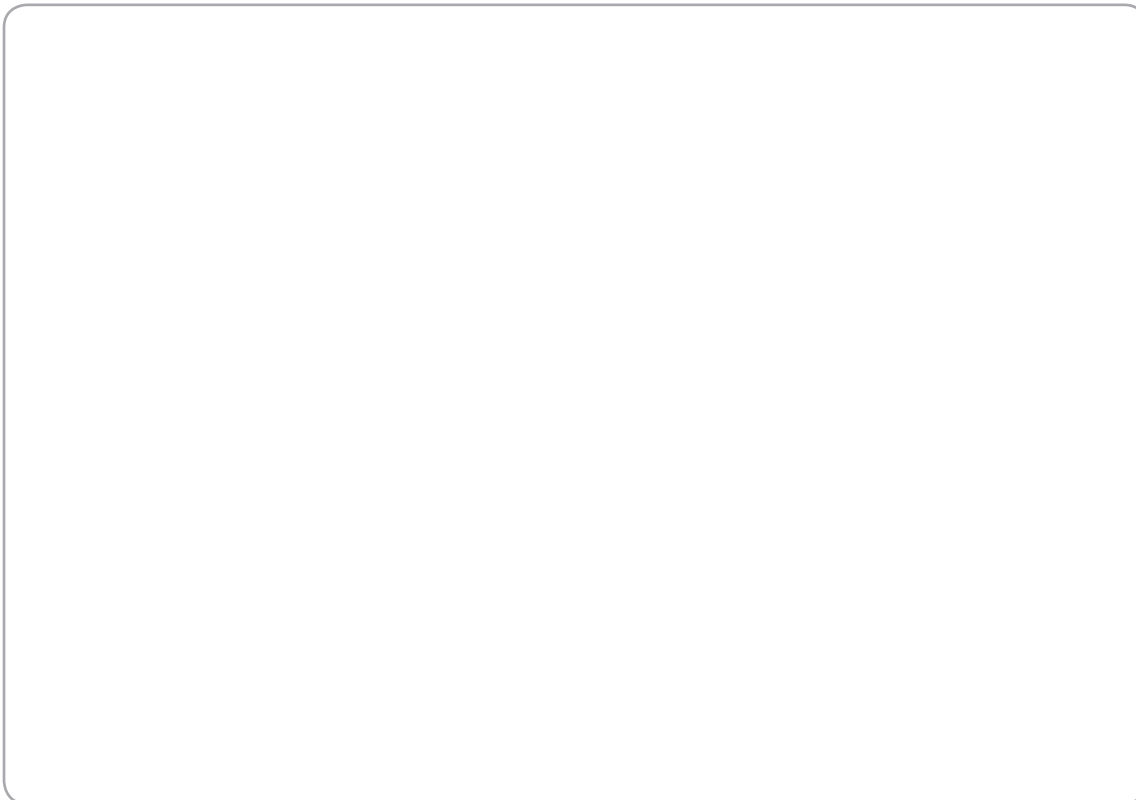There are four colours

- pink
- yellow
- brown
- green.

Jean needs a data collection sheet for the different types of cupcakes.

(a) Create a data collection sheet for Jean.

(3)

Draw your data collection sheet in the space below.

Jean has baked 30 cupcakes.
15 cupcakes are lemon and 15 cupcakes are chocolate.

Jean picks up a cupcake at random to decorate it with butter cream.

(b) What is the likelihood of the cupcake being lemon?
    Explain why you think this.

(1)

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

(Total for Question 7 is 4 marks)

8 Jean needs to buy a new oven for the bakery.

She finds these two offers for the same oven.

Grillo	**Oven World**
24 monthly payments of £249.99	First payment £2498.99
	18 payments of £185.99
£180 delivery fee	£120 delivery fee
Order today, delivery in 3 days	Order today, delivery in 2 weeks

Jean wants to pay the cheapest price for the new oven.

Which offer should Jean choose?
Show why you think this.

(5)

P 5 3 8 5 5 A 0 1 8 2 0

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

(Total for Question 8 is 5 marks)

TOTAL FOR PAPER IS 48 MARKS

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