Write your name here

Surname		Other names	

Pearson Edexcel
Functional Skills

Centre Number

Candidate Number

Mathematics
Level 1

8 – 12 February 2016
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 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 ▶

PEARSON

Answer all questions in this section.

Write your answers in the spaces provided.

1 Zac works in a hairdressing salon.
He is going to mix some hair lightener.

Zac needs to mix 1 part hair lightener to 2 parts developer.
He has 45 ml of hair lightener.

(a) How many ml of developer does Zac need?

(2)

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

There is a special offer at the salon for July.

Special offer

July

Highlights £38

20% off

(b) Work out 20% of £38

(2)

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

(Total for Question 1 is 4 marks)

2 Claire owns the hairdressing salon.
Jane, Alex and Leanne work as stylists in the salon.

Claire needs to plan these new appointments for Monday afternoon.

Mr Brown - highlights with Alex

Mrs Kellett - re-style with Leanne, before 3:30

Dev and Hal - child's cut each, one after the other, with the same stylist

Ms Patel - cut and blow dry with Jane, after 2:15

Claire knows this information.

re-style	$\frac{3}{4}$ hour
child's cut	15 minutes
cut and blow dry	30 minutes
highlights	$1\frac{1}{2}$ hours

Claire has marked on the appointment sheet when the stylists have other appointments or breaks.

(a) Plan the new appointments on the sheet for Claire.
Remember to check your appointment sheet.

(5)

Appointment sheet for Monday			
	Jane	**Alex**	**Leanne**
1:00	Mr Heywood	Mrs Johnson	Deb
1:15	Mr Heywood	Mrs Johnson	Deb
1:30		Mrs Johnson	Deb
1:45		Mrs Johnson	
2:00			
2:15		Paul	
2:30	Break		Andy
2:45			Andy
3:00		Break	
3:15	Mike		Break
3:30	Mike		
3:45			
4:00			
4:15			
4:30			Pam
4:45	Ms Begum		Pam

Claire wants to give her stylists a pay rise.
She will give them a pay rise if her mean average profit over the last 6 months is more than £5000

The table shows the profit each month for the last 6 months.

Month	January	February	March	April	May	June
Profit (£)	3580	4810	4320	5460	5120	6860

(b) Will Claire give her stylists a pay rise?
Show a check of your working.

(4)

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

Show your check in the box below.

☑

3 Zac wants to fill 15 bottles with shampoo.
Each bottle holds 400 ml.

Zac has 5 litres of shampoo to fill the bottles.

Does Zac have enough shampoo to fill the 15 bottles?
Show why you think this.

(3)

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

(Total for Question 3 is 3 marks)

P 4 9 9 2 3 A 0 7 2 0

SECTION B: Holiday jobs

Answer all questions in this section.

Write your answers in the spaces provided.

4 Dave is a college student.
He works at a leisure centre in the summer holidays.

Dave earns £6.70 for each hour he works.

The table shows the hours he worked in July.

Week	1	2	3	4
Hours worked	30	32	35	23

Dave thinks he earned more than £750 in July.

(a) Did Dave earn more than £750 in July?
Show a check of your working.

(4)

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

Show your check in the box below.

☑

Dave is going to clean the gym floor at the leisure centre.

A bottle of cleaning fluid contains 600 ml.

He needs to add $\frac{1}{3}$ of the bottle of cleaning fluid to water.

(b) Work out $\frac{1}{3}$ of 600 ml.

(2)

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

(Total for Question 4 is 6 marks)

5 Jane works at a supermarket in her summer holidays.

She earns

- £6.10 per hour for the first 27 hours she works each week
- £7.60 per hour for any extra hours she works.

Last week Jane worked 35 hours.
She thinks her pay will be £250 for last week.

(a) Is Jane correct?
Show why you think this. **(4)**

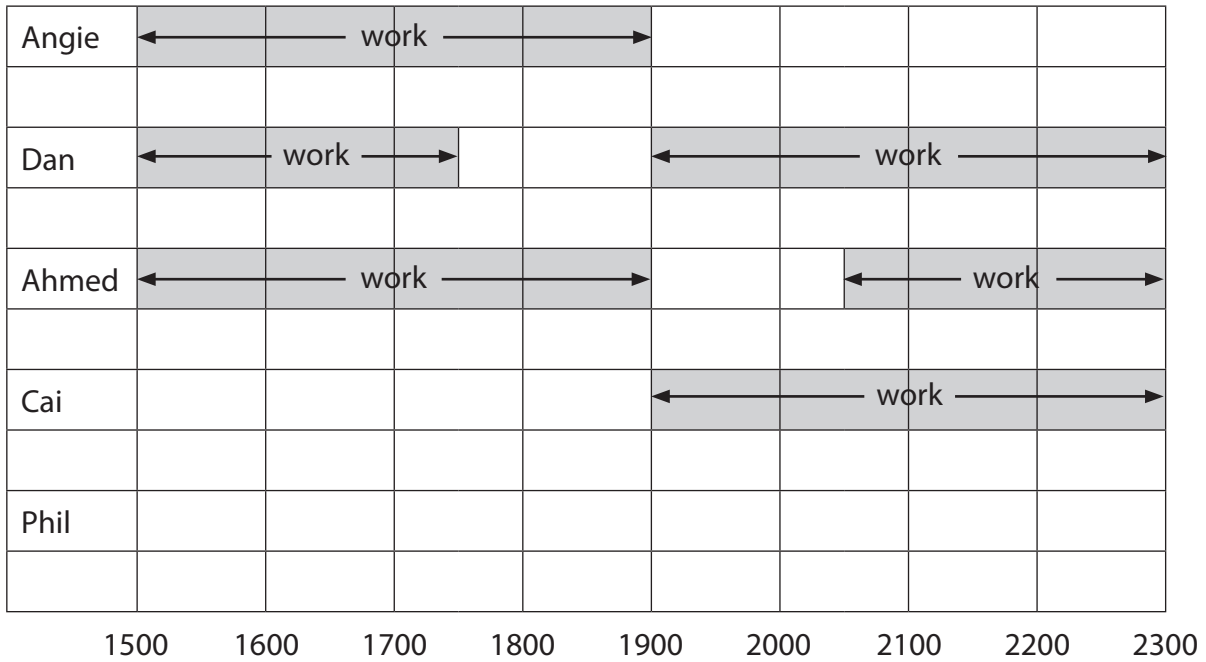Use the box below to show clearly how you get your answer.

Phil is a delivery driver.
Jane needs to plan the hours Phil will work on Friday.

The hours worked by four other drivers on Friday are shown on the diagram.

Jane needs 3 delivery drivers to work each hour from 1500 to 2300

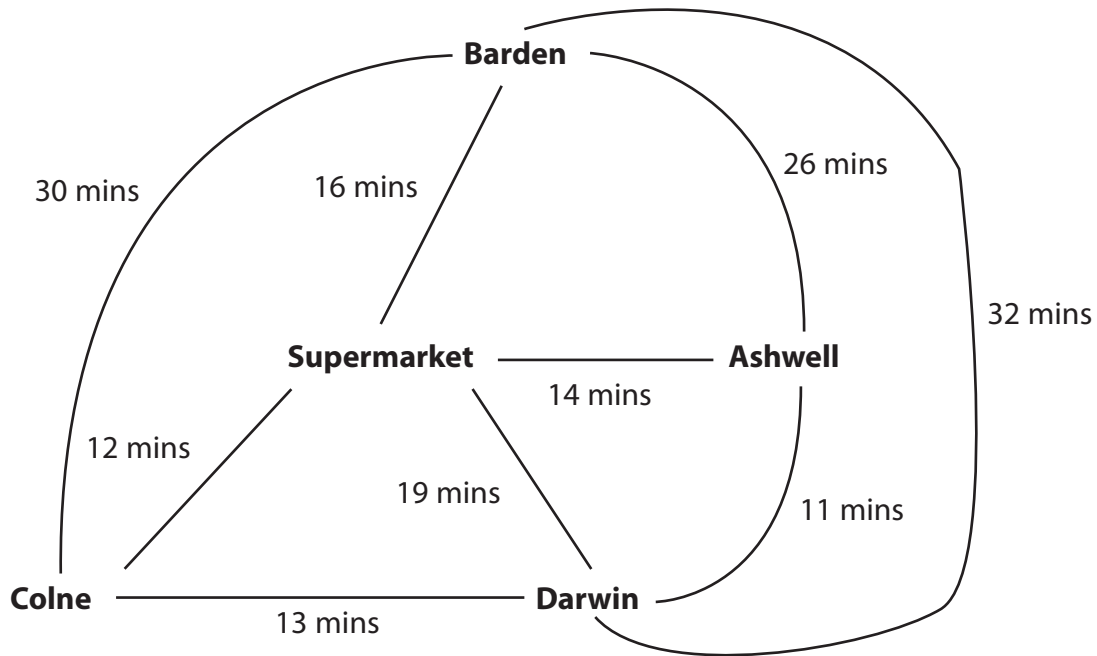(b) On the diagram, show the hours Jane needs Phil to work.

(2)

Angie	←——— work ———→								
Dan	←— work —→				←——— work ———→				
Ahmed	←——— work ———→				←— work —→				
Cai					←——— work ———→				
Phil									

1500   1600   1700   1800   1900   2000   2100   2200   2300

(Total for Question 5 is 6 marks)

Turn over ▶

6 Phil needs to make deliveries to Ashwell, Barden and Colne.

He uses this diagram to help him plan his route.

The route must start and finish at the supermarket.

Phil wants to use the route that takes the shortest time.

Plan the route for Phil that takes the shortest time.
Give the time taken for this route in hours and minutes.

(4)

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

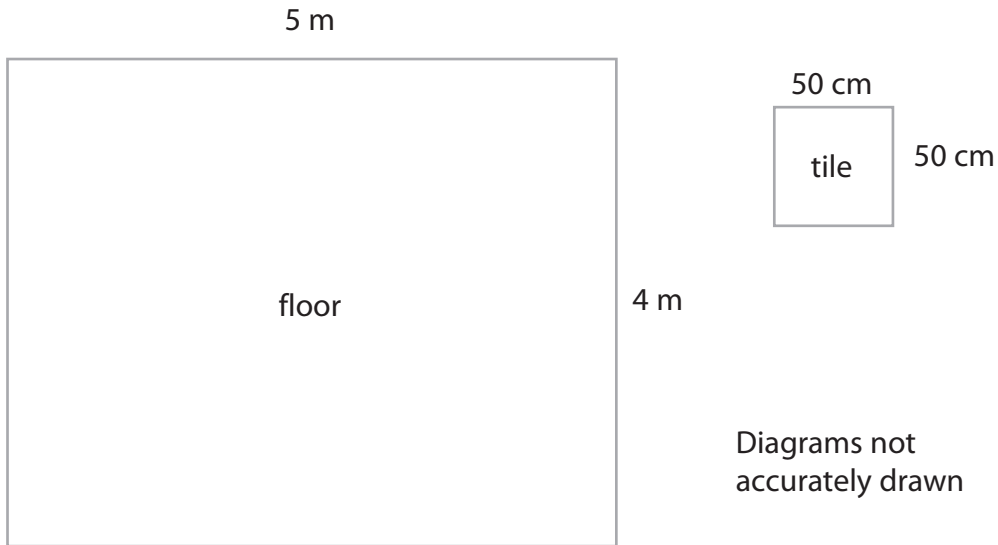**(Total for Question 6 is 4 marks)**

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

SECTION C: Home improvements

Answer all questions in this section.

Write your answers in the spaces provided.

7 Shafiq needs tiles to cover the floor of a room in his home extension.

The diagram shows the dimensions of the floor and each tile.

5 m

floor

4 m

50 cm

tile

50 cm

Diagrams not accurately drawn

The floor is in the shape of a rectangle 5 m by 4 m.
Each tile is in the shape of a square 50 cm by 50 cm.

Shafiq has 90 tiles.

(a) Does Shafiq have enough tiles to cover this floor?

(5)

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

Pete is a tiler.
He needs to give Shafiq a price to tile the floor.

Pete uses this rule to work out the price.

| Number of hours | → | Multiply by 15 | → | Add cost of materials (£) | → | Price (£) |

Pete says

> The job will take 20 hours.
>
> The cost of materials is £52

Pete works out the price to be £342

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

(3)

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

(Total for Question 7 is 8 marks)

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

8 Shafiq is going to put his treadmill in a room.
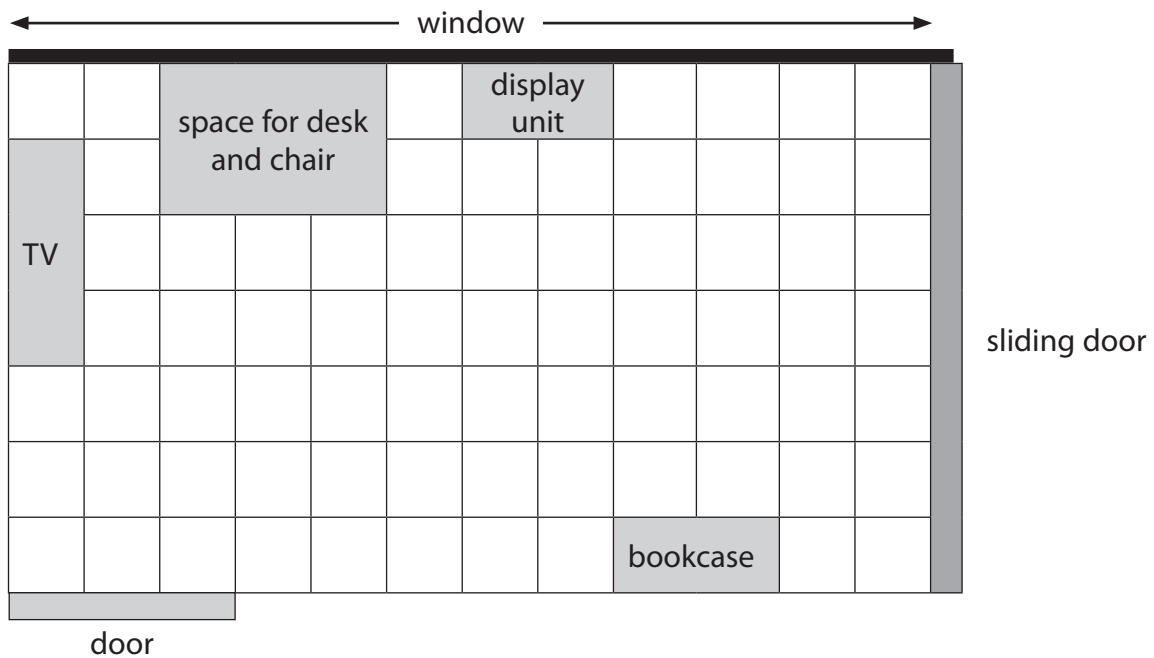
The treadmill needs a rectangular space 2 m by 1 m.

There must be a clear space of at least $\frac{1}{2}$ m around the treadmill.

The treadmill must be at least 1 m away from the TV.

Shafiq draws a plan of the room on a grid.

> (a) Draw the space for the treadmill on the grid.
>
> **(3)**

window →

		space for desk and chair		display unit					
TV									
							bookcase		

sliding door

door

Key: 1 square on the grid is 50 cm by 50 cm in the room

Shafiq wants a TV and broadband package.

He needs to pay

- a monthly fee
- line rental.

Shafiq wants to include a Sports Pack.

He sees two offers on the internet.
Each offer is for 12 months.

Offer 1	**Offer 2**
Fee £23 each month	Fee £16.50 each month
Line rental normal price £18 each month	Line rental £150 for one year
Now half normal price	Sports Pack £5 each month
Free Sports Pack	Sports pack free for the first 3 months

Shafiq wants to choose the offer with the cheapest price for 12 months.

(b) Which offer should Shafiq choose?
Show a check of your working.

(5)

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

Show your check in the box below.

☑

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P 4 9 9 2 3 A 0 2 0 2 0