

Write your name here

Surname

Other names

**Pearson Edexcel
Functional Skills**

Centre Number

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Candidate Number

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Mathematics

Level 1



10 – 14 October 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 ►

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PEARSON

SECTION A: Home finance

Answer all questions in this section.

Write your answers in the spaces provided.

- 1** Zoe wants to put some money into a savings bond.

She puts £4000 into the savings bond for one year.
After one year she will get 3% interest on the money she put in.

What is 3% of £4000?

(3)

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

(Total for Question 1 is 3 marks)

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- 2 Zoe is doing her food shopping online.
She has two coupons she can use to save money on her shopping.

Coupon A

£12 off your food shopping
when you spend over £50

Coupon B

$\frac{1}{4}$ off your food shopping

Zoe can only use one of the coupons.
She wants to use the coupon that will save the most money.

At the checkout the total for her food shopping is £52.60

- (a) Which coupon should Zoe use?
Show why you think this.

(2)

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

Large empty box for showing the solution to the problem.



Zoe wants to save money on her monthly spending.

At the moment she spends £70 a month on travel to work.
She also pays £49.99 a month for her TV and internet contract.

Zoe decides to make some changes.

She will cycle to work on some days.
Zoe will save £30 on travel to work each month.

She will get a new TV and internet contract for £34.59 a month.

(b) How much money will Zoe save in 12 months with these changes?
Show a check of your working.

(5)

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

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Use the box below to show your check.



(Total for Question 2 is 7 marks)

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- 3 Zoe has a smart meter at home to show her electricity use. She has a record of the amount of electricity used each month.

Month	Sep	Oct	Nov	Dec	Jan	Feb
Electricity used in kWh	274	283	297	299	335	312

Zoe thinks the mean amount of electricity used each month for these 6 months is 300 kWh.

- (a) Is Zoe correct?
Show why you think this. (3)

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

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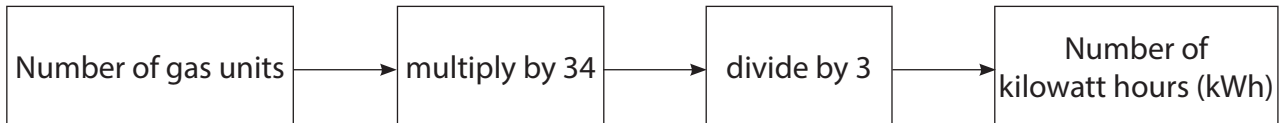
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Zoe checks her last gas bill.
It states that she used 135 gas units.

The energy company uses this rule to convert gas units to kilowatt hours (kWh).



The energy company converted 135 gas units to 1530 kWh on her bill.
Zoe thinks the energy company made a mistake.

(b) Did the energy company make a mistake?
Show why you think this.

(3)

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

(Total for Question 3 is 6 marks)



SECTION B: Sports day

Answer all questions in this section.

Write your answers in the spaces provided.

4 Fez is organising a sports day at his school.

There will be these team events on the day.

- 5-a-side football (F)
- Tug-of-war (T)
- Hockey (H)

Fez will allow 1 hour 15 minutes for each team event.

There will also be two races on the day.

- Relay race (R)
- Sack race (S)

Fez will allow 20 minutes for each race.

There can only be one event or race at a time.

There will be a 45-minute lunch break starting at 1.00 pm.
Fez wants to start the day at 10.00 am and finish by 3.30 pm.

Fez needs to make a time plan for the sports day.

Make a time plan for the sports day for Fez.
Remember to show all the start times and all the end times.

(4)

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Use the box below to show your time plan.



(Total for Question 4 is 4 marks)



- 5 There will be 4 teams playing football matches during the sports day. The teams are called A, B, C and D.

Each team will play every other team once.
Fez needs a data collection sheet to record the score of each match.

(a) Design a data collection sheet for Fez.

(3)

Use the box below to show your data collection sheet.

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There are 42 pupils who will take part in the tug-of-war event.
18 of these pupils are girls.

Fez needs to put the pupils into teams.

Each team will have the same number of pupils.

Each team will also have


- at least 7 pupils
- both boys and girls
- the same number of boys in each team.

(b) How many boys and how many girls should be in each team?

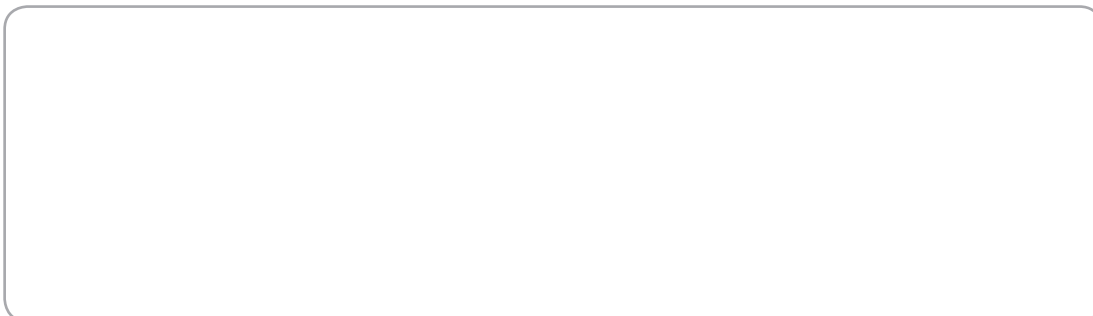
Show a check of your working.

(5)

Use the box below to show your working.



Use the box below to show your check.



(Total for Question 5 is 8 marks)



- 6 Fez needs to buy a rope for the tug-of-war event.
Each metre of rope costs £2.75

Fez needs to have one rubber grip put on each end of the rope.
It costs £7.50 to put a rubber grip on one end of a rope.

Fez wants to buy a rope that is 34 metres long with rubber grips at both ends.
He has a budget of £120

- (a) Is £120 enough to buy this rope with rubber grips?
Show why you think this.

(3)

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

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Fez has different coloured batons for the relay race.
He has these batons

- 3 red
- 4 blue
- 2 gold
- 15 silver.

He keeps the batons in a black bag.
Fez picks one baton at random from the bag.

(b) What is the likelihood that Fez picks a silver baton from the bag?

(1)

Tick (✓) the box to show the likelihood.

impossible

unlikely

evens

likely

certain

(Total for Question 6 is 4 marks)



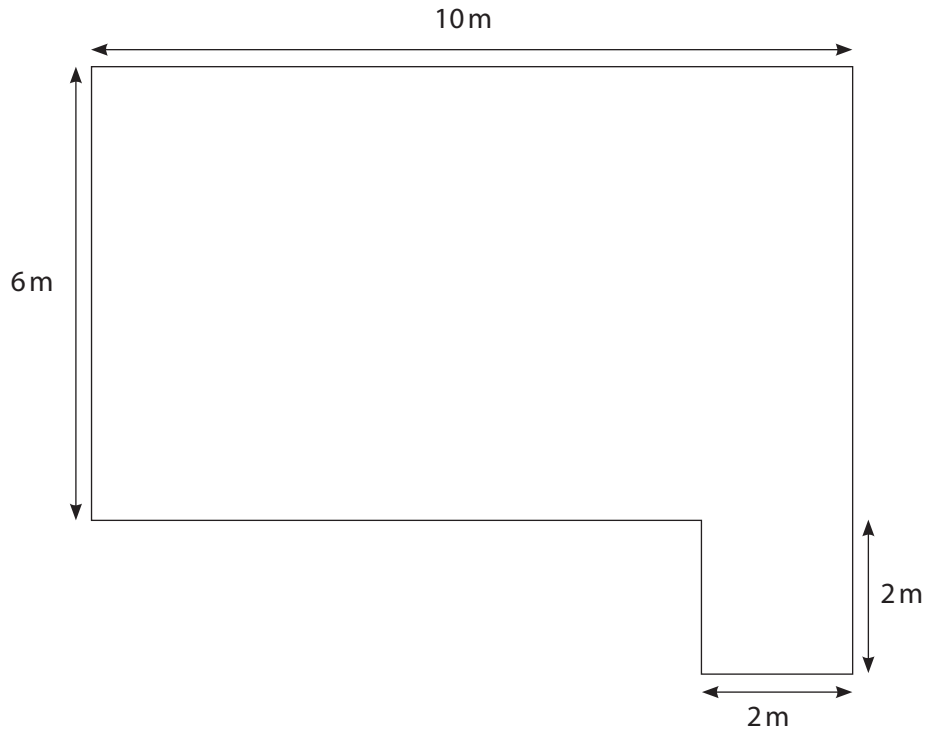
SECTION C: Hairdressing salon

Answer all questions in this section.

Write your answers in the spaces provided.

- 7 Eric owns a hairdressing salon.
He wants to fit some work stations in a new room in his salon.

Eric has this scale drawing of the room.



Each work station needs a space of 4 m^2

(a) What is the maximum number of work stations that could fit in the room?

(4)

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Eric wants to put some hair washing stations in a different room.
A washing station needs one sink and one chair.

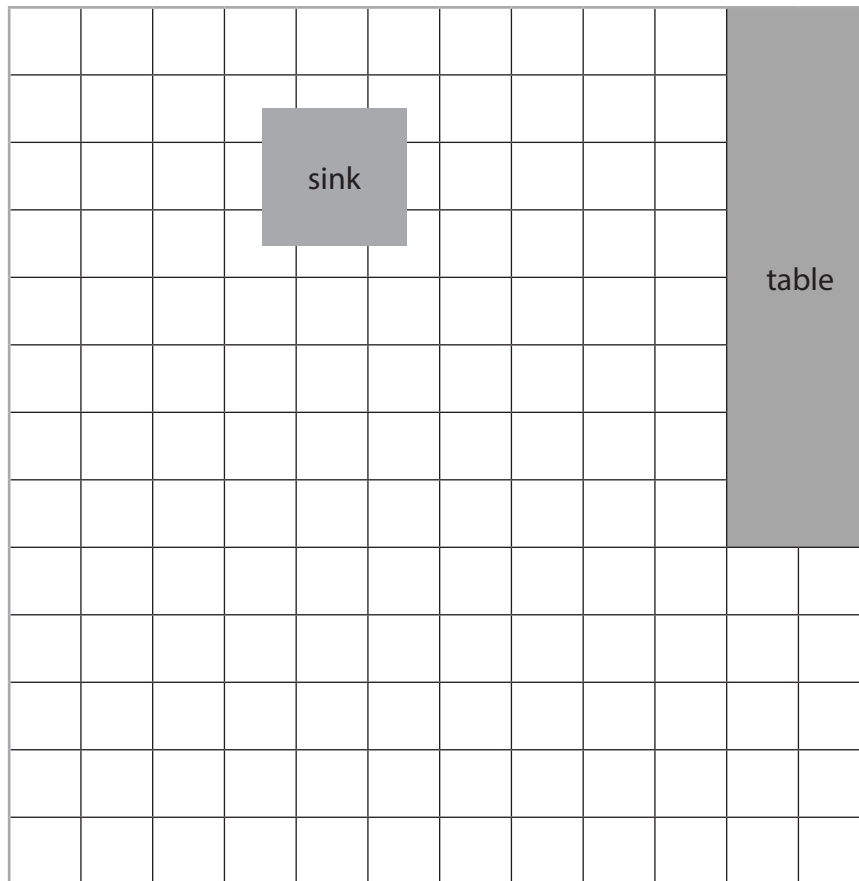
The chair needs

- a rectangular space 60 cm wide and 110 cm long
- one of its shorter sides to go along a side of the sink
- to have at least 50 cm of free space around its other sides.

Eric starts to draw a plan of one washing station on a grid.

(b) Draw a space for the chair on the grid.

(3)



Key

One square on the grid is 20 cm by 20 cm in the room.

(Total for Question 7 is 7 marks)

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8 Eric wants to buy shampoo for the salon.

He finds out that, on average, 250 ml of shampoo is used each day in the salon.
He needs to buy enough shampoo for at least 30 days.

Eric finds this information on a website.

Shampoo
5 litre bottle
£36.99

Delivery £3.99
Free delivery on orders over £50

Eric has £75 to spend on the shampoo he needs.

Is £75 enough to buy all the shampoo Eric needs?
Show why you think this. (5)

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

(Total for Question 8 is 5 marks)



- 9 Eric employs Claire at the salon.
On Monday Claire works from 9am to 1pm and from 2pm to 6pm.

Eric pays Claire £12.50 an hour.
He thinks he needs to pay her £100 for Monday.

Is Eric correct?
Show a check of your working.

(4)

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

Use the box below to show your check.



(Total for Question 9 is 4 marks)

TOTAL FOR PAPER IS 48 MARKS

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