

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



13 – 17 June 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: Kayaking

Answer all questions in this section.

Write your answers in the spaces provided.

- 1 Vicky is planning a kayaking trip.
She wants to buy this wetsuit.
Vicky wants to work out the discount.



(a) What is 25% of £72? (2)

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

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Vicky likes this kayak.

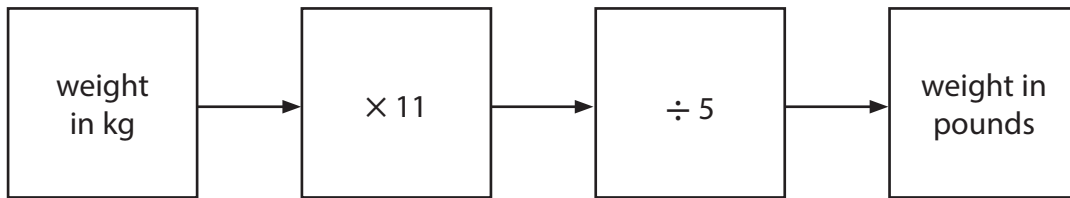
It has a weight of 17 kg.



Vicky must be able to lift the kayak.

She knows she can comfortably lift a weight of up to 33 pounds.

Vicky uses this rule to convert between kg and pounds.



(b) Will Vicky be able to comfortably lift the kayak?
Show a check of your working.

(4)

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

Write your check in the box below.



Vicky finds this information on a website about the prices of items for kayaking.

Item	Kayak	Basic paddle	Deluxe paddle	Basic seat	Deluxe seat	Paddle tie
Price per item excluding VAT (£)	207.91	29.12	47.91	27.45	53.29	19.12
Price per item including VAT (£)	249.50	34.95	57.50	32.95	63.95	22.95

The website has this offer.

Special Offer

kayak
deluxe paddle
deluxe seat
paddle tie

**All these items for
£316.95 including VAT**

Vicky wants to buy a kayak, a deluxe seat, a deluxe paddle and a paddle tie. She has to pay the price including VAT for all the items.

(c) How much money will Vicky save if she buys all of these items using the special offer?

(4)

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



(Total for Question 1 is 10 marks)

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- 2 Vicky plans to paddle her kayak on the sea from South Stack to North Stack. The distance between South Stack and North Stack is 6000 m.

Vicky allows 15 minutes to paddle every 600 m.

She thinks it will take her 3 hours to paddle the 6000 m distance.

Is Vicky correct?
Show why you think this.

(4)

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

(Total for Question 2 is 4 marks)

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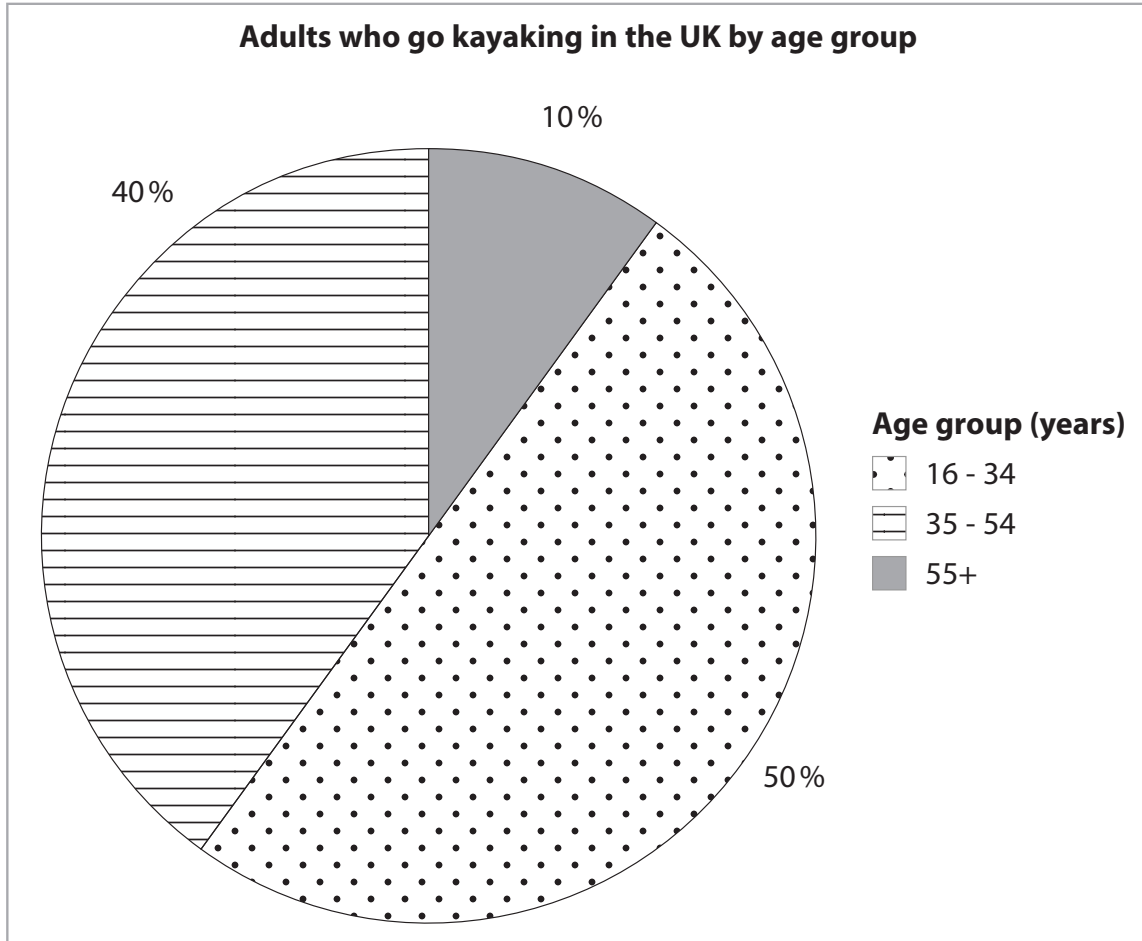
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- 3 Vicky is 39 years old.
She wants to know how popular kayaking is for different age groups.

Vicky finds this pie chart showing information about the age of adults who go kayaking.



Vicky thinks that more than a third of adults who kayak in the UK are in the same age group as her.

Is Vicky correct?
Show why you think this. (2)

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

(Total for Question 3 is 2 marks)



SECTION B: Moving offices

Answer all questions in this section.

Write your answers in the spaces provided.

- 4** Kirsty works for a company.
The company is moving to a new office building.

Kirsty hires some packing boxes.
She thinks that the staff will use a mean average of 4 packing boxes each.

This is the number of packing boxes the staff actually used.

Staff	Sajid	Olly	Kirsty	Des	Ava	Lucy	Maria
Number of packing boxes	5	2	4	3	2	6	3

- (a) Did the staff use a mean average of 4 packing boxes each?
Show a check of your working. (4)

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

Write your check in the box below.



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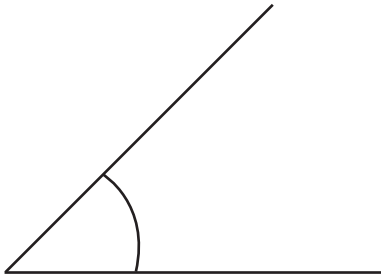


The new office building must have a wheelchair ramp at the front entrance.
The angle between the ramp and ground must be 5°

(b) Which of these angles is 5° ?

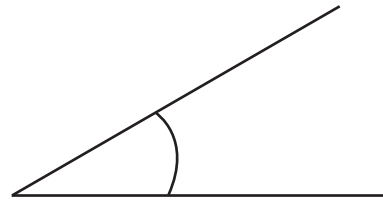
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Tick (✓) the correct answer below.



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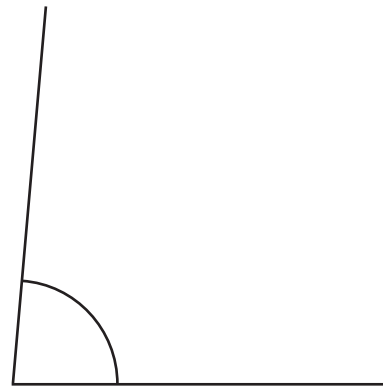
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B



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C



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D

(Total for Question 4 is 5 marks)



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- 5 Sajid works at the company.
He works in the office from 9 am to 1 pm on Tuesday.

Sajid writes some notes about the jobs he needs to do on Tuesday.

Accounts $1\frac{1}{2}$ hours

Help desk 45 minutes

Meeting at 10:50 am lasting 40 minutes

He plans to use any time he has free between 9 am and 1 pm to pack boxes.

Sajid wants to make a time plan.

He wants the plan to show the start and finish time for each job and for when he can pack boxes.

- (a) Make a time plan for Sajid.
Remember to check your answer.

(4)

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Make your time plan in the box below.



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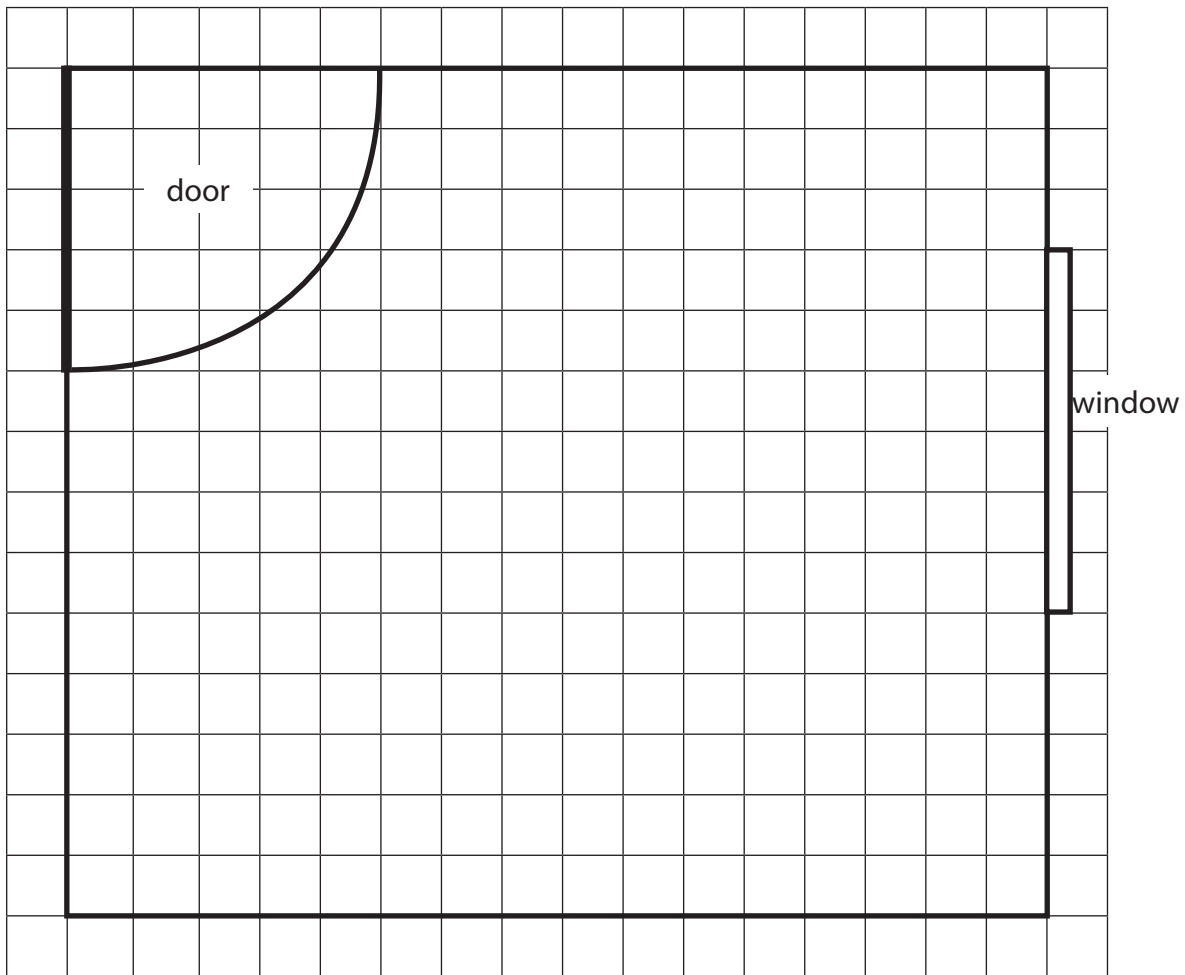
Sajid wants to put a desk and a coffee table in his new office.

The desk is in the shape of a rectangle 100 cm by 160 cm.
Sajid wants to put the desk

- against a wall
- at least 60 cm away from the window.

The coffee table is in the shape of a square with side length 80 cm.
He wants 40 cm of clear space around the coffee table.

Sajid draws this plan of the office on a grid.



Key: 1 square on the grid is 20cm by 20cm on the floor space
——— wall

(b) Draw the space for the desk and the space for the coffee table on the grid.
Label the desk D and label the coffee table T. (4)

(Total for Question 5 is 8 marks)

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- 6 Kirsty is going to order drinking water for the new office. She orders this bottle.

15 litres



The glasses in the office each hold 250 ml.
Kirsty thinks this bottle of water will completely fill 75 glasses.

Is Kirsty correct?
Show why you think this.

(3)

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

(Total for Question 6 is 3 marks)



SECTION C: Garden improvements

Answer all questions in this section.

Write your answers in the spaces provided.

- 7 Dan wants to make some changes to his garden.
He wants to put a wooden beam around the edge of a flower bed.

Dan has a wooden beam which is 2 m in length.



He wants to cut the wooden beam into two pieces.

Dan wants the length of one piece to be $\frac{3}{4}$ of the length of the beam.

He thinks the length of this piece will be 1.6 m.

- (a) Is Dan correct?
Show a check of your working.

(3)

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

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Write your check in the box below.

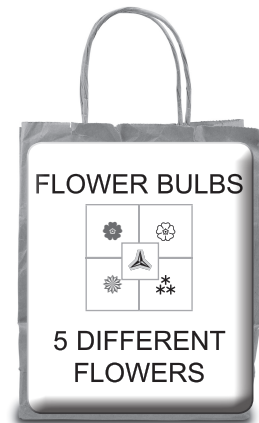


Dan buys this bag of flower bulbs to plant in his garden.

The flower bulbs will grow into flowers of different colours.

There are

- 30 blue flower bulbs
- 46 white flower bulbs
- 9 red flower bulbs
- 4 yellow flower bulbs
- 11 pink flower bulbs.



Dan picks one bulb from the bag at random.

(b) How likely is it that Dan picks a yellow flower bulb?

(1)

Tick (✓) your answer below.

impossible

unlikely

evens

likely

certain

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(Total for Question 7 is 4 marks)

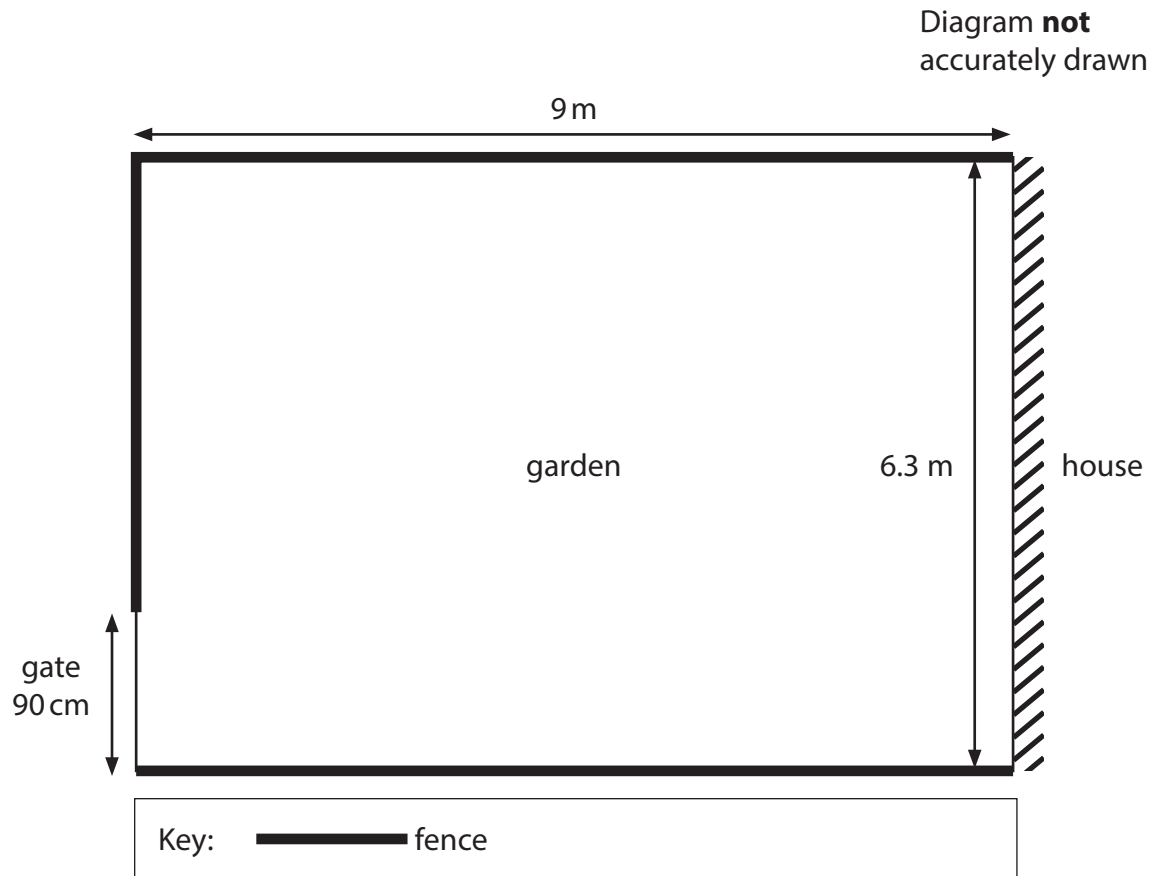


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8 Dan wants to put a fence around three sides of his garden.

He will leave a 90 cm wide gap in the fence for a gate.

He draws this sketch.



Dan will make the fence using panels.

Each panel

- is 180 cm wide
- must not be cut
- must not overlap another panel.

Dan works out that he needs 13 panels.

(a) Does Dan need 13 panels for the garden fence?
Show why you think this.

(4)

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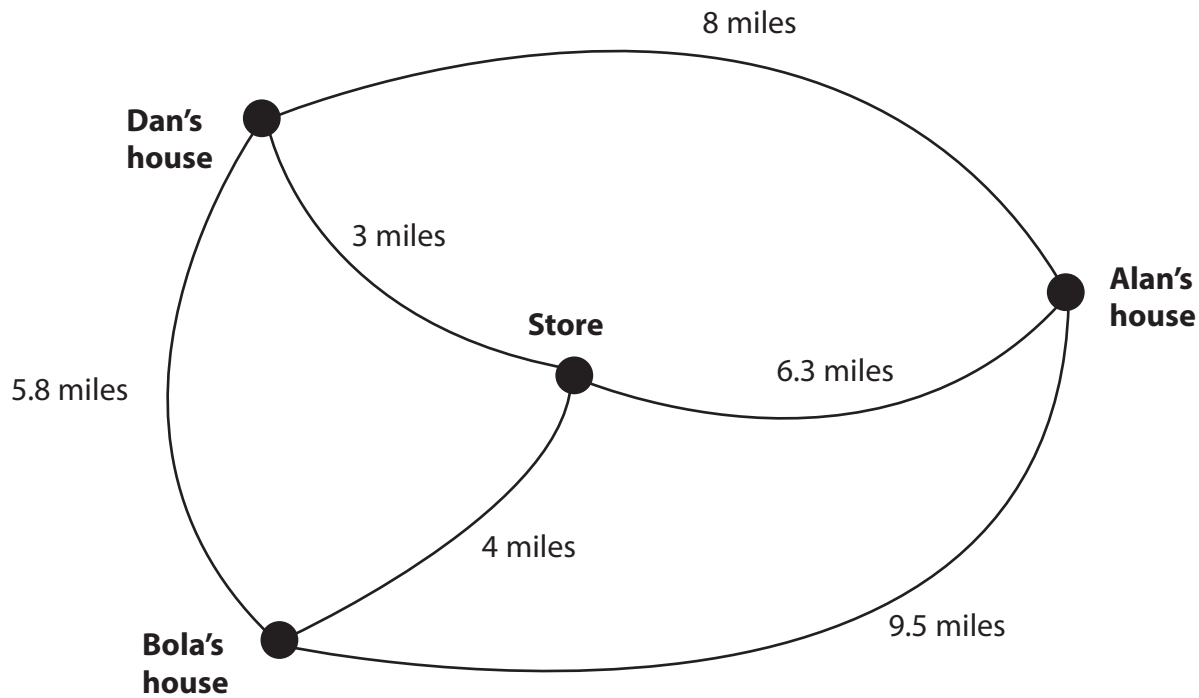


Dan orders the panels from a store.

A lorry driver will deliver the panels to Dan's house.
He will also deliver panels to Alan's house and to Bola's house.

The lorry driver will start his journey and finish his journey at the store.

The diagram shows the distances between the houses and the store.



- (b) Find a route for the lorry driver.
What is the total distance of the route?

(3)

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

(Total for Question 8 is 7 marks)



- 9 Dan wants to cover a space in the garden with gravel.
He needs to buy 300 kg of gravel.

A shop has this offer.

25 kg bag of gravel
£8.49 for 1 bag
or
£34.95 for 5 bags

Dan has a budget of £100 to spend on gravel.

Can Dan buy 300 kg of gravel with £100?
Show why you think this.

(5)

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

(Total for Question 9 is 5 marks)

TOTAL FOR PAPER IS 48 MARKS



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