Name: MathsLinks.co.uk Solutions

Total Marks: Unfinished

GCSE (9-1) Grade 4 Functional Maths Questions

Instructions

Use **black** ink or ball-point pen.
Fill in the boxes at the top of this page with your name.
Answer **all** questions.
Answer the questions in the spaces provided
- there may be more space than you need.

Show all your working out

Information

The marks for **each** question are shown in brackets.
Use this as a guide as to how much time to spend on each question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed

Advice

Read each question carefully before you start to answer it
Attempt every question
Check your answers if you have time at the end

1. The diagram shows a patio in the shape of a rectangle.

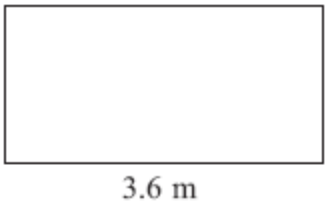


Diagram **NOT** accurately drawn

The patio is 3.6 m long and 3 m wide.

Matthew is going to cover the patio with paving slabs.
Each paving slab is a square of side 60 cm.

Matthew buys 32 of the paving slabs.

(a) Does Matthew buy enough paving slabs to cover the patio?
You must show all your working.

.....

(3)

The paving slabs cost £8.63 each.

(b) Work out the total cost of the 32 paving slabs.

£ .....

(3)

(6 marks)

***2.** Mr Weaver's garden is in the shape of a rectangle.

In the garden

there is a patio in the shape of a rectangle
and two ponds in the shape of circles with diameter 3.8 m.

The rest of the garden is grass.

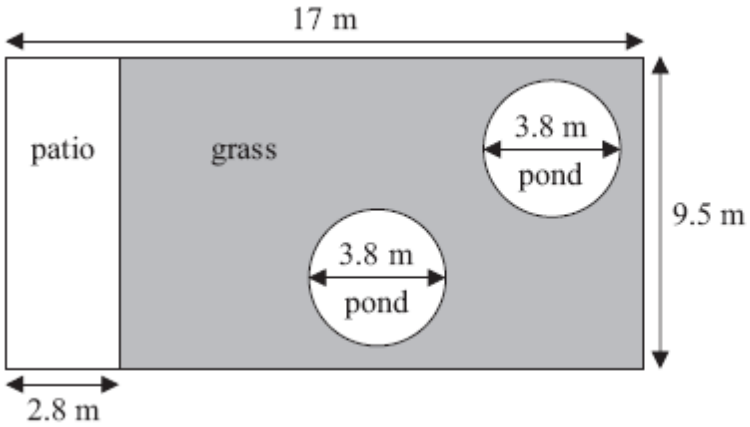


Diagram **NOT** accurately drawn

Mr Weaver is going to spread fertiliser over all the grass.
One box of fertiliser will cover 25 m2 of grass.

How many boxes of fertiliser does Mr Weaver need?
You must show your working.

(5 marks)

***3.** Henry is thinking about having a water meter.

These are the two ways he can pay for the water he uses.

Water Meter

A charge of £28.20 per year

plus

91.22p for every cubic metre of water used

1 cubic metre = 1000 litres

No Water Meter

A charge of £107 per year

Henry uses an average of 180 litres of water each day.

Henry wants to pay as little as possible for the water he uses.
Should Henry have a water meter?

(5 marks)

*4. Here is part of Gary's electricity bill.

Electricity bill	
New reading	7155 units
Old reading	7095 units
Price per unit 15p	

Work out how much Gary has to pay for the units of electricity he used.

(4 marks)

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5. Peter works out the cost of the gas he used last year.
At the start of the year, the gas meter reading was 12967 units.
At the end of the year, the gas meter reading was 14059 units.
Each unit of gas he used cost 44p.

Work out the mean cost per month of the gas he used last year.

£ .....

(5 marks)

6. Here is a diagram of Jim's garden.

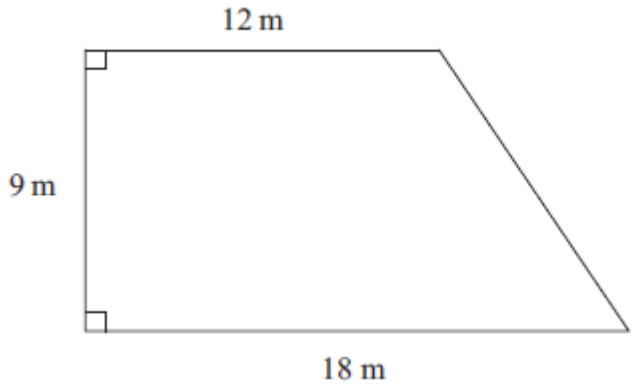


Diagram **NOT** accurately drawn

Jim wants to cover his garden with grass seed to make a lawn.

Grass seed is sold in bags.
There is enough grass seed in each bag to cover 20 m^2 of garden.

Each bag of grass seed costs £4.99

Work out the least cost of putting grass seed on Jim's garden.

£ .....

(5 marks)

7. Jon has a flower garden in the shape of a circle.
The diameter of the garden is 5 metres.

Jon wants to put fencing around the edge of the garden.
The fencing costs £1.80 per metre.

Work out the total cost of the fencing.

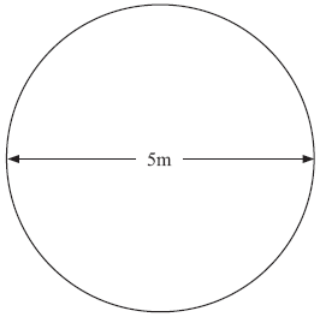


Diagram **NOT** accurately drawn

£.....

(5 marks)

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8. The diagram shows a CD.
The CD is a circle of radius 6 cm.

CDs of this size are cut from rectangular sheets of plastic.
Each sheet is 1 metre long and 50 cm wide.

Work out the greatest number of CDs that can be cut from one rectangular sheet.

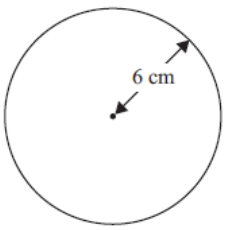


Diagram **NOT** accurately drawn

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(4 marks)

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*9. Jenny fills some empty flowerpots completely with compost.

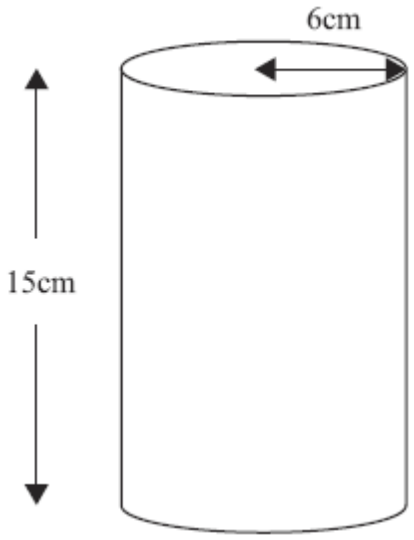


Diagram **NOT** accurately drawn

Each flowerpot is in the shape of a cylinder of height 15 cm and radius 6 cm.
She has a 15 litre bag of compost.

She fills up each flowerpot completely.
How many flowerpots can she fill completely?
You must show your working.

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(6 marks)