MME.
mathsmadeeasy.co.uk

Maths Made Easy

Solutions to Level 1 Functional Skills Mathematics Sample Assessment

Before you start revising, we recommend you book your exam with Maths Made Easy to ensure your place, as limited spaces are available.

[Book your exam now](#)

Or

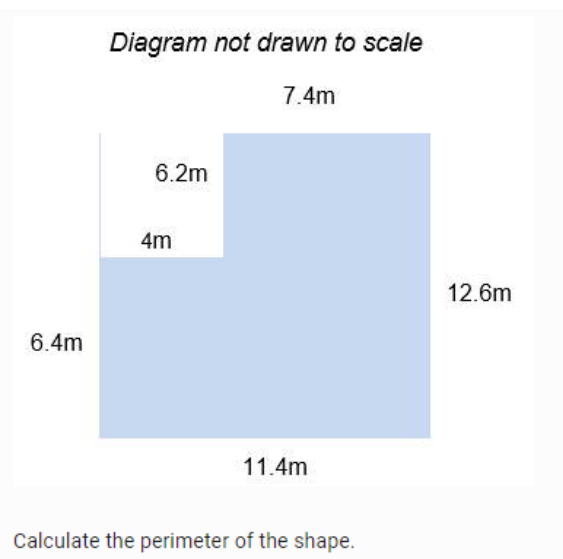Contact us to find out more information.

Email: Info@MathsMadeEasy.co.uk

Phone: 020 3633 5145

Question List

Maths Made easy - Book your exam now

SECTION A: Task 1 – non-calculator (15 marks)

Question 1

Diagram not drawn to scale

Calculate the perimeter of the shape.

(2 marks)

Workings:

$Perimeter = 7.4 + 12.6 + 11.4 + 6.4 + 4 + 6.2 = 48$ m

Marks:

1 mark for correct method

1 mark for correct answer

Maths Made easy - Book your exam now

Question 2

Calculate 17^2.

(2 marks)

Workings:

$17^2 = 17 \times 17$

-	10	7
10	100	70
7	70	49

$17^2 = 100 + 70 + 70 + 49 = 289$

Marks

1 mark for any correct multiplication method

1 mark for correct answer

Question 3

There is a ratio of 6:1 red marbles to white marbles.
There are 42 red marbles in total. How many white marbles are there?

(1 mark)

Workings:

$1 \, part = 42 \div 6 = 7$

So number of white marbles = 7

Marks:

1 mark for correct answer

Question 4

Calculate 14.73 + 18.49

(1 mark)

Workings:

$$\begin{array}{r} 14.73 \\ + 18.49 \\ \hline 32.22 \end{array}$$

Marks:

1 mark for correct answer

Question 5

Calculate 46.8 ÷ 100

(1 mark)

Workings:

$46.8 ÷ 100 = 0.468$

Marks:

1 mark for correct answer

Calculate 14.73 + 18.49

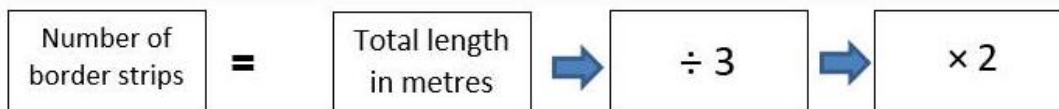Maths Made easy - [Book your exam now](#)

Question 6

Janice wants to put border strips around **three** sides of her square lawn. The length of one side of the lawn is 14 metres.

Border strip

To calculate the number of strips she needs, Janice follows this rule:

| Number of border strips | = | Total length in metres | ➡ | ÷ 3 | ➡ | × 2 |

Each border strip costs £9.89.

Show an **estimate** of the cost of the required number of border strips.

(4 marks)

Workings:

The length of the garden is 14 m, and she wants to put border strips on 3 sides of the garden, which is a square, so the length of border strips she needs is:

$14 \times 3 = 42m$

The number of strips we need is:

$$no. \, of \, strips = \left(\frac{42}{3}\right) \times 2$$

$no. \, of \, strips = 14 \times 2 = 28$

We can then estimate the total cost by rounding £9.89 to £10 and multiplying by the number of strips:

$total \, cost = cost \, per \, strip \times no. \, of \, strips$
$total \, cost = £10 \times 28 = £280$

Marks:

1 mark for calculating the length of border needed

1 mark for correct number of strips

1 mark for rounding up cost per unit

1 mark for correct answer

Question 7

Janice wants to paint the fence panels in her garden. Each fence panel needs approximately 300ml of paint. She buys 2 tins of paint. Each tin contains 1.5 litres of paint.

How many fence panels can she paint before she runs out?

(2 marks)

Workings:

$$no.\, of\, panels = panels\, per\, tin \times\, no.\, of\, tins$$

$$panels\, per\, tin = \frac{1.5\; litres}{300\; ml} = \frac{1500\; ml}{300\; ml} = 5$$

So total number of panels Janice can paint is:

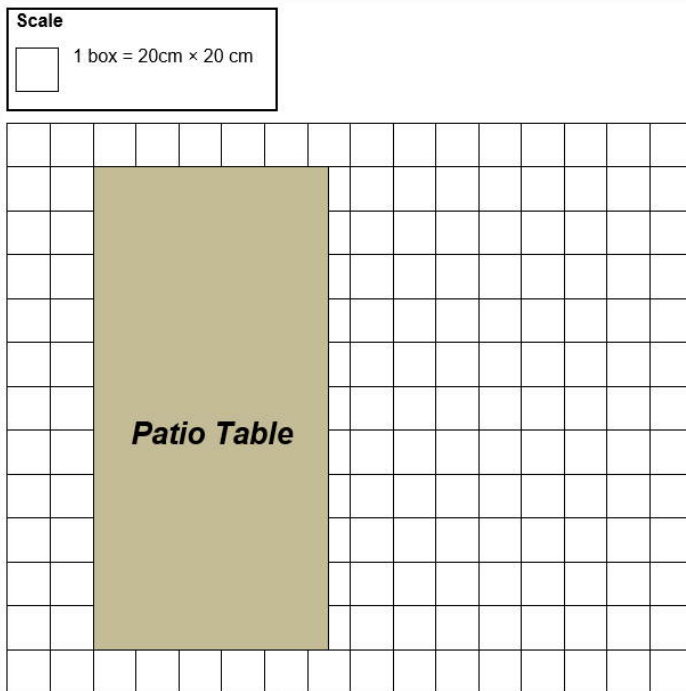$$no.\, of\, panels = 5 \times 2 = 10$$

Marks:

1 mark for correct calculation

1 mark for correct final answer

Question 8

Janice wants to buy a table to put in her patio area. She draws a diagram of her patio to show the size of table she wants.

What are the actual measurements of the table Janice wants?

Scale

1 box = 20cm × 20 cm

Patio Table

(2 marks)

Workings:

$length = 11\ boxes = 11 \times 20cm = 220\ cm\ (2.2m)$

$width = 5.5\ boxes = 5.5 \times 20cm = 110\ cm\ (1.1m)$

Marks:

1 mark for correct length

1 mark for correct width

Question 9

Janice wants to buy new carpet for her bedroom. The bedroom is rectangular and has a floor area of 30m^2.

Complete the table below to show the dimensions of her bedroom.

Bedroom	
Length	
Width	4m

Workings:

$$length = \frac{area}{width} = \frac{30\ m^2}{4\ m} = 7.5\ m$$

Maths Made easy - Book your exam now

SECTION B: Task 2 calculator permitted (15 marks)

Question 10

A bag contains 6 red balls, 6 yellow balls and 6 blue balls. Express as a fraction the probability of picking out a blue ball.

(1 mark)

<u>Workings:</u>

$$probability\ (blue) = \frac{no.\,blue}{total\,no.} = \frac{6}{6+6+6} = \frac{6}{18} = \frac{1}{3}$$

<u>Marks</u>

1 mark for correct simplified answer

Question 11

Convert $^5/_8$ to a percentage.

(1 mark)

<u>Workings:</u>

$$\frac{5}{8} \times 100 = 0.625 \times 100 = 62.5\%$$

<u>Marks:</u>

1 mark for correct answer

Question 12

Calculate 2.5 ÷ 0.375.
Give your answer to two decimal places.

(1mark)

<u>Workings:</u>

$$\frac{2.5}{0.375} = 6.\dot{6} = 6.67 \text{ (2 dp)}$$

<u>Marks:</u>

1 mark for correct answer

Maths Made easy - <u>Book your exam now</u>

Question 13

Jared owns a bakery. He receives an order for party cakes to serve 72 people. He has this list of ingredients:

Party Cake Ingredients
(Serves 12 people)
400g flour
400g butter
375g sugar
6 eggs

Jared has 2 ¾ kg of flour.
How much flour will Jared have left over if he bakes enough cakes for everyone at the party? Give the units in your answer.

(4 marks)

Workings:

There are 72 people at the party, and the recipe serves 12.

$72 \div 12 = 6$

Amount of flour required:

$flour\ needed = 6 \times 400g = 2400g$

Jared has 2 ¾ kg of flour, which is 2.75 kg = 2750 g.

$leftover\ flour = 2750 - 2400 = 350\ g \quad (0.35\ kg)$

Marks:

1 mark for calculating amount of flour needed

1 mark for conversion from mixed fraction to decimal

1 mark for correct calculation of leftover amount

1 mark for correct answer with appropriate units

Maths Made easy - Book your exam now

Question 14

Jared wants to bake 6 loaves of bread. A loaf of bread takes 7 minutes to prepare. Jared will bake all the loaves at the same time. The loaves will take 45 minutes to bake. He allows 10 minutes for them to cool down.

What is the latest time that Jared should start preparing his first loaf of bread so that all the loaves are cooled by 6.15am?

(3 marks)

Workings:

$$prep\ time = 6\ loaves \times 7\ mins\ per\ loaf = 42\ mins$$

$$total\ time = 42\ mins\ (prep) + 45\ mins(bake) + 10\ mins(cool) = 97\ mins$$

$$97\ mins = 1\ h\ 37\ mins$$

$$06{:}15\ am - 1\ h\ 37\ mins = 04{:}38\ am$$

Marks:

1 mark for calculating prep time

1 mark for calculating total time required

1 mark for correct final answer

Maths Made easy - [Book your exam now](#)

Question 15

Jared needs to buy decorations for a celebration cake. He sees this price list at his local trade store.

Item	Price
Candles	13p each
Icing	£1.40 per packet
Sugar Alphabet Letters	56p each
15% discount if you use your trade card	

Jared will use his trade card to buy the decorations. He buys 20 candles, 2 packs of icing and 15 letters to make the word CONGRATULATIONS.

How much money will Jared spend on the decorations using his trade card?

(4 marks)

Workings:

Candles: $£0.13 \times 20 = £2.60$

Icing: $£1.40 \times 2 = £2.80$

Letters: $£0.56 \times 15 = £8.40$

Total: $£2.60 + £2.80 + £8.40 = £13.80$

Discount = 15% (=0.15) so we need to multiply by $(1 - 0.15) = 0.85$

Discounted total: $£13.80 \times 0.85 = £11.73$

Marks:

1 mark for calculating prices of individual items

1 mark for correct total

1 mark for calculation of percentage

1 mark for correct final answer

Maths Made easy - Book your exam now

Question 16

Use estimation to calculate the trade discount.

(1 mark)

Workings:

Using the workings from the previous question, we can estimate the discounted amount by rounding the total before and after the discount is applied as follows:

£13.80 ≈ £14.00

£11.73 ≈ £12.00

$Discount \approx £14.00 - £12.00 = £2.00$

Marks:

1 mark for correct final answer

Use estimation to calculate the trade discount.

SECTION B: Task 3 calculator permitted (15 marks)

Question 17

Write 'One hundred and ninety thousand, four hundred and ninety three' in numbers.

(1 mark)

Workings:

Answer: 190,493

Marks:

1 mark for correct answer

Question 18

The table below shows interest rates from five different banks.

Bank A	Bank B	Bank C	Bank D	Bank E
4.72%	4.07%	4.726%	4.672%	4.76%

Which bank offers the highest interest rate?

(1 mark)

Workings:

Bank E has the highest interest rate.

Marks:

1 mark for correct answer

Maths Made easy - Book your exam now

Question 19

The table below shows the scores of 16 students in an exam.

42	33	28	19	35	41	36
38	31	29	27	44	40	28
39	14					

Complete the table below to show frequency.

(1 mark)

Workings:

See complete table below

Number of marks	Frequency
0 – 9	0
10 – 19	2
20 – 29	4
30 – 39	6
40 - 49	4

Marks:

1 mark for correct answer

Maths Made easy - Book your exam now

Question 20

Ryan is a member of a five a side football team.

The table below shows the goal difference for Ryan's team over the last 4 football matches.

Goal difference is the number of 'goals for' minus the number of 'goals against'.

Complete the table below to show the missing values.

(1 mark)

Workings:

See completed table below

Match	Goals For	Goals Against	Goal Difference
Match 1	2	3	-1
Match 2	3	3	0
Match 3	1	4	-3
Match 4	1	3	-2
Totals	7	13	-6

Marks:

2 marks for correct calculation of goals for/against (-1 mark for wrong answer)

1 mark for correct total

Question 21

Ryan's team are playing a match on Saturday. The table below shows the predicted chance of rainfall on a scale of 0 to 1 from Monday to Saturday.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Predicted chance of rainfall (%)	0.40	0.50	0.35	0	0.92	0.88

Ryan thinks it is unlikely to rain on Saturday.

Is Ryan correct? Explain why you think this.

(1 mark)

Workings:

Ryan is wrong. The chance of rain on Saturday is 0.88 which is greater than 50%.

Marks:

1 mark for correct statement <u>and</u> supporting explanation.

16

Question 22

The players in Ryan's team warm up before the charity match by running at least 1km around the edge of the pitch. How many full laps of the pitch will they need to run?

18m

36m
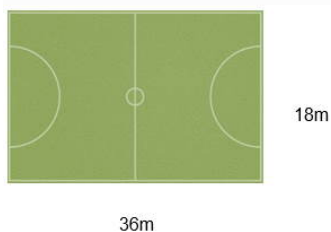
(3 marks)

Workings:

$$distance\ per\ lap = 2 \times 36m + 2 \times 18m = 108m$$

$$number\ of\ laps = \frac{1000m}{108m} = 9.25\ laps$$

1km is 9.25 laps so they must run 10 full laps

Marks:

1 mark for distance per lap

1 mark for calculating number of laps needed (or any other correct method)

1 mark for correct final answer

Question 23

Ryan's team sold 380 tickets for the charity football match.

35% of the tickets sold were for children and 20% of the tickets were sold for senior citizens. The rest of the tickets were sold at full price for adults.

Ryan thinks that 176 tickets were sold at full price for adults.

Is Ryan correct?

(3 marks)

Workings:

Children's tickets:	$0.35 \times 380 = 133$ children
Senior's tickets:	$0.2 \times 380 = 76$ seniors
Total:	$133 + 76 = 209$ (children + seniors)
Adults:	$380 - 209 = 171$

Therefore, Ryan is <u>wrong.</u> The number of adult tickets sold is 171.

Marks:

1 mark for calculating number of senior's and children's tickets

1 mark for calculating correct number of adult tickets

1 mark for correct statement

Maths Made easy - [Book your exam now](#)

Question 24

Ryan has collected £3697.40 from the 380 ticket sales. The football club will donate £2.94 from each ticket to charity.

How much money will be left after the donation?

(2 marks)

Workings:

Donations total: $£2.94 \times 380 = £1117.20$

Leftover amount: $£3697.40 - £1117.20 = £2580.20$

Marks:

1 mark for correct amount from donations

1 mark for correct leftover amount

SECTION B: Task 4 calculator permitted (13 marks)

Question 25

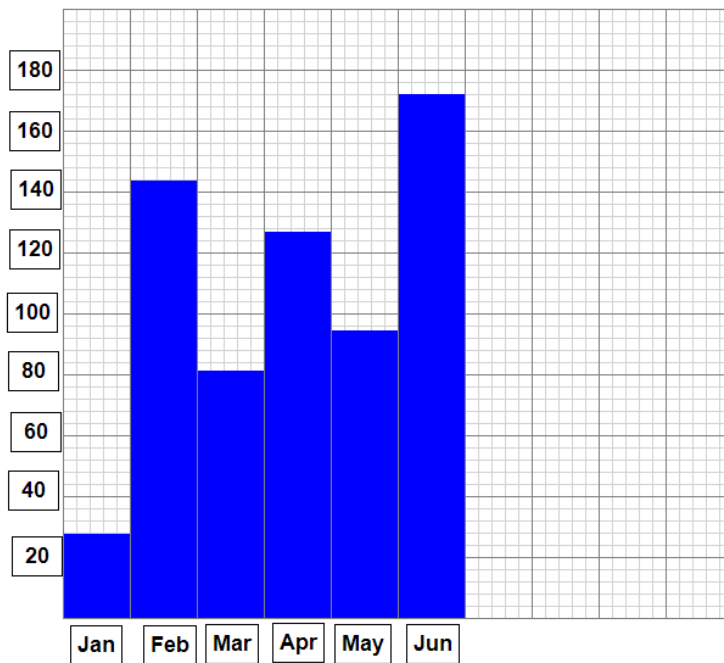The table below shows sales of laptops over a 6 month period.

Sales of laptops						
Months	Jan	Feb	Mar	Apr	May	June
Number of laptops sold	28	144	82	126	94	172

Draw a bar chart to show the sales of laptops over the 6 month period.

(1 mark)

Workings:

See completed bar chart below

Marks:

1 mark for correctly plotted bar chart with appropriate scale.
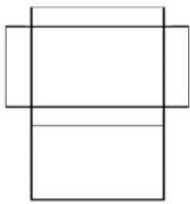
Question 26

Davinder makes jewellery that she sells to local markets. She wants to buy some small boxes with lids, like the picture below, to put necklaces in.
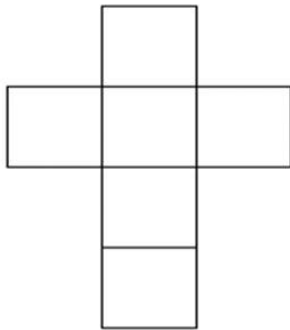

She receives a selection of boxes to choose from. The net diagram of each box is shown below.

She receives a selection of boxes to choose from. The net diagram of each box is shown below.
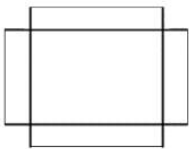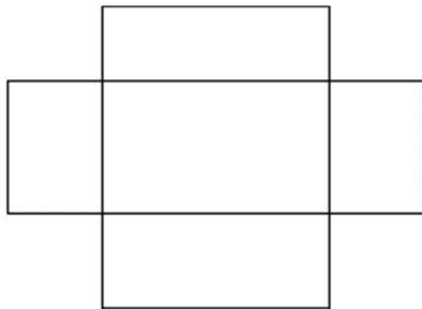
Net A
(7cm x 5cm x 1.5cm)

Net B
(4cm x 4cm x 4cm)

Net C
(7cm x 5cm x3cm)

Net D
(10cm x 8cm x 3cm)

Which net diagram best represents the box shown in the picture? Explain the reason for your choice of net in the box below.

(2 marks)

Workings:

Net A is the best representation. Net B is a cube, Net C and Net D do not have a lid.

Marks:

1 mark for correct choice of net

1 mark for correct explanation

Maths Made easy - Book your exam now

Question 27

Davinder has received an order for 100 **bracelets**.

She packages each bracelet into a box 10cm by 8cm by 3cm.

Davinder will put the 100 boxes of bracelets into larger boxes for postage and delivery.

She has a choice of Box A or Box B, with measurements as shown below. She will only use one size of box.

Box A costs £0.70 each and Box B costs £1.80 each. She wants to spend as little as possible.
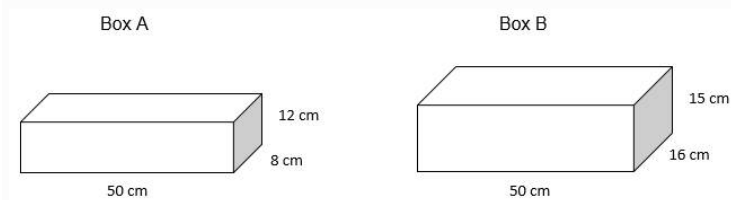
Should Davinder choose Box A or Box B?

(4 marks)

Workings:

Volume of small box: $\qquad$ $10cm \times 8cm \times 3cm = 240\ cm^3$

Volume of Box A: $\qquad$ $50cm \times 12cm \times 8cm = 4800\ cm^3$

Volume of Box B: $\qquad$ $50cm \times 16cm \times 15cm = 12000\ cm^3$

Number of small boxes in Box A: $\qquad$ $\frac{4800}{240} = 20$ small boxes

Number of small boxes in Box B: $\qquad$ $\frac{12000}{240} = 50$ small boxes

Number of Box A required: $\qquad$ $\frac{100}{20} = 5$ boxes

Number of Box B required: $\qquad$ $\frac{100}{50} = 2$ boxes

Box A total cost: $\qquad$ $5 \times £0.70 = £3.50$

Box B total cost: $\qquad$ $2 \times £1.80 = £3.60$

Box A is the cheapest option.

Marks:

1 mark for calculating area of boxes

2 marks for calculating number of boxes required

1 mark for calculating price for each option <u>and</u> correct statement

Question 28

Davinder wants to know what her best-selling item of jewellery is and which jewellery item sold the most consistently over the 6-month period from July to December.

She has this information:

Jewellery item	Mean of items sold per month	Range of items sold per month
Bracelets		
Necklaces	47	84
Rings	35	62
Earrings	39	71

The table below shows the sales of bracelets over the 6 month period:

Months	Jul	Aug	Sept	Oct	Nov	Dec
Number of Bracelets Sold	23	22	38	28	44	97

Which is the best-selling jewellery item over the 6-month period?

(2 marks)

Workings:

Bracelets mean: $\dfrac{23+22+38+28+44+97}{6} = \dfrac{252}{6} = 42$

The best-selling item is necklaces as the mean sales are the highest.

Marks:

1 mark for calculating mean for bracelets.

1 mark for correct statement.

Question 29

Which jewellery item sold the most consistently over the 6-month period?

(2 marks)

Workings:

Bracelets range: $97 - 22 = 75$

The rings sold the most consistently over the month period as the range of sales was the smallest.

Marks:

1 mark for calculating the range for bracelets

1 mark for correct statement

Question 30

Davinder makes a profit of £1592 from jewellery sales. She wants to use a third of the profit to buy more stock and pay the remainder into a savings account.

How much money will Davinder pay into the savings account?

22

Maths Made easy - <u>Book your exam now</u>

(2 marks)

<u>Workings:</u>

$$remaining\ amount = \left(1 - \frac{1}{3}\right) = \frac{2}{3}$$

$$remaining\ amount = \frac{2}{3} \times £1592 = £1061.33$$

Davinder will pay £1061.33 into the savings account.

<u>Marks:</u>

1 mark for calculation

1 mark for correct final answer

Maths Made easy - <u>Book your exam now</u>