Pearson Edexcel
Functional Skills

Centre Number

Candidate Number

Sample assessment material for first teaching September 2019

Time: 25 minutes

Paper Reference **SAML2/01**

Mathematics

Level 2

Section A (Non – Calculator)

You must have:
Pen, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses.

Total Marks

My signature confirms that I will not discuss the content of the test with anyone.

Signature: _____

Instructions

- Use a **black** ink or 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.
- Write your final answers in the boxes provided.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You **must** show clearly how you get your answers in the spaces provided. Marks will be awarded for your working out.
- Check your working and your answers at each stage.
- Diagrams are **not** accurately drawn, unless otherwise indicated.
- **Calculators may not be used**
- Take the value of π to be 3.14

Information

- The total mark for this section is 16
- The marks for each question are shown in brackets.
  – use this as a guide to how much time to spend on each question.
- This sign ☑ shows where marks will be awarded for showing your checks.

Advice

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

Turn over ▶

Pearson

20 *Functional Skills* Maths
Level 2 Practice Papers
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FUNCTIONAL SKILLS MATHS LEVEL 2
Pearson Edexcel

Pearson Edexcel · MME
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Surname		Other names

Pearson Edexcel
Functional Skills Level 2

	Centre Number	Candidate Number

Functional Skills Maths Level 2 Practice Papers - Paper 1
Maths Made Easy

Time: 1 hour 30 minutes	Paper Reference: **MME/FSL2**

Functional Skills Maths

Level 2

Section B (Calculator)

You must have: Pen, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses.	Total Marks

Instructions

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- This sign shows where marks will be award
- Advice · Read each question carefully befo
- Check your answers if you have time at the

**INCLUDES
20 FULL PAPERS
& ANSWERS**

MME.

Answer ALL questions. Write your answers in the spaces provided.

1   Ria works in a paint shop.
    She needs to make 1500 ml of purple paint.

    Ria makes purple paint by mixing red paint and blue paint and white paint in the
    ratio 3 : 2 : 1

    How much blue paint does Ria need to make 1500 ml of purple paint?

    (3)

    total number of parts

    $$3 + 2 + 1 = 6 \text{ parts}$$

    $$\frac{1500 ml}{6} = 250 ml$$

    $$2 \times 250 ml = 500 ml \text{ of blue}$$

    500 ml

    (Total for Question 1 is 3 marks)

2 Here is some information about the number of houses sold by 20 sales people.

Number of houses sold	Frequency	Midpoint	Freq x MP
1 – 5	7	3	21
6 – 10	6	8	48
11 – 15	5	13	65
16 – 20	2	18	36
	20		170

Work out an estimate for the mean number of houses sold.

(3)

$$\frac{170}{20} = 8.5$$

8.5

(Total for Question 2 is 3 marks)

3 Amanda wants to buy a new mobile phone.
She sees these two offers for the same mobile phone.

Offer A	Offer B
2 year contract monthly cost £59 and mobile phone cost £39.96	SIM only monthly cost £11 and mobile phone cost £889.92

Amanda says,

'I will save more than £300 in total over 2 years with offer B'.

Use estimation to check if her statement is reasonable.
You **must** show your working.

(4)

Offer A:

$$24 \times 60 = 1440$$
$$+ \quad 40$$
$$\overline{£1480}$$

Offer B:

$$24 \times 10 = 240$$
$$+ \quad 890$$
$$\overline{1130}$$

£1480 − £1130 = £350

so Amanda's statment is resonable

(Total for Question 3 is 4 marks)

4 Matt buys a new fish tank.

The fish tank is in the shape of a cuboid.

The diagram shows water in the tank.

30 cm

30 cm

100 cm
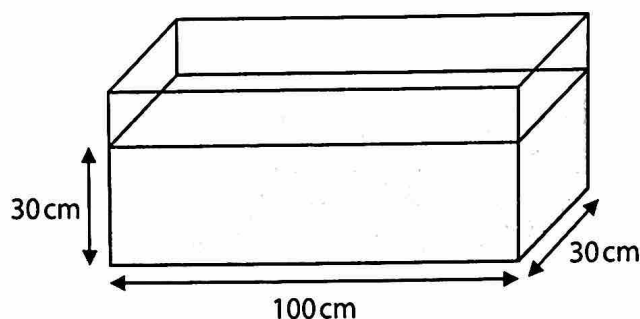
Matt knows

$1000 cm^3 = 1$ litre

1 gallons = 4.5 litres

He can keep 2 small fish in the tank for every 1 gallon of water in the tank.

Matt thinks he can keep more than 36 small fish in the tank.

Is Matt correct?

(6)

$30 \times 30 \times 100 = 90,000 cm^3$

$90,000 cm^3 = 90$ litres

$\frac{90}{4.5} = 20$ gallons

So matt could keep up to 40 small fish in the tank

So he is correct

Yes - 40 fish

(Total for Question 4 is 6 marks)

TOTAL FOR SECTION A = 16 MARKS

Candidate surname

Other names

Pearson Edexcel
Functional Skills

Centre Number

Candidate Number

Sample assessment material for first teaching
September 2019

Time: 1 hour 30 minutes

Paper Reference **SAML2/01**

Mathematics

Level 2

Section B (Calculator)

You must have:
Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses.

Total Marks

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Signature: _____

Instructions

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- Diagrams are **not** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button take the value of π to be 3.14
- **Calculators may be used.**

Information

- The total mark for this section is 48
- The total mark for this paper is 64
- The marks for each question are shown in brackets.
  – *use this as a guide to how much time to spend on each question.*
- This sign ☑ shows where marks will be awarded for showing your checks.

Advice

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

Turn over ▶

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15

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FUNCTIONAL SKILLS MATHS LEVEL 2
Pearson Edexcel

PEARSON Edexcel **MME** mathsmadeeasy.co.uk

Surname		Other names	

Pearson Edexcel
Functional Skills Level 2

Centre Number | Candidate Number

Functional Skills Maths Level 2 Practice Papers - Paper 1
Maths Made Easy

Time: 1 hour 30 minutes | Paper Reference: **MME/FSL2**

Functional Skills Maths

Level 2

Section B (Calculator)

You must have:
Pen, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses.

Total Marks

Instructions
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Information
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- This sign shows where marks will be awarded
- Advice - Read each question carefully before
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INCLUDES 20 FULL PAPERS & ANSWERS

MME.

Answer ALL questions. Write your answers in the spaces provided.

1   Data set A has a median value of 3.1

Here is data set B.

$\not{14}$ $\not{-9}$ $\not{28}$ $-\not{38}$ $-\not{13}$ $\not{-2}$

(a) Write a statement to compare the median values of the
two sets of data.

(2)

$$-38 \qquad -13 \qquad -9 \qquad -2 \qquad 14 \qquad 28$$

$$\frac{(6+1)}{2} = 3.5^{th} \text{ value} \uparrow$$

$$-2 + -9 = -11 \qquad , \qquad -\frac{11}{2} = -5.5$$

So the median for set B (-5.5)
is small than that for set A
(3.1)

☑ (b) Show a check of your answer for the median of data set B.

(1)

$$-5.5 \times 2 = -11$$

$$-2 + -9 = -11$$

(Total for Question 1 is 3 marks)

2 Dan throws two fair dice.

The numbers on dice A are   1   −2   3   −4   5   −6
The numbers on dice B are   −1   2   −3   4   −5   6

The table shows some total scores from throwing the two dice.

Dice A

	+	1	−2	3	−4	5	−6
Dice B	−1	0	−3	2	−5	4	−7
	2	3	0	5	−2	7	−4
	−3	−2	−5	0	−7	2	−9
	4	5	2	7	0	9	−2
	−5	−4	−7	−2	−9	0	−11
	6	7	4	9	2	11	0

(a) Complete the table.

(1)

Dan throws the two dice once.

(b) What is the probability that the total score is −11?

(1)

1/36

1/36

Dan throws the two dice again.

(c) What is the probability that the new total score is 0?

(1)

6/36 = 1/6

1/6

(Total for Question 2 is 3 marks)

3 Last year Zack had two jobs.

Zack worked

- in an office for 12 months and earned £2600 per month

- at a gym for 39 weekends and earned £80 per weekend.

What fraction of his total income last year came from his work at the gym?
Write the fraction in its simplest form.

(4)

$$12 \times 2600 = 31,200$$
$$39 \times 80 = 3120$$
$$\overline{\pounds\ 34,320}$$

$$\frac{3120}{31200} = \frac{1}{10}$$

$$\frac{1}{10}$$

(Total for Question 3 is 4 marks)

4 Here is a prism.
The cross section of the prism is a pentagon.

3.5

10.5 cm

15 cm

5

1.5

4.5 cm

7.5 cm

18 cm

front

6
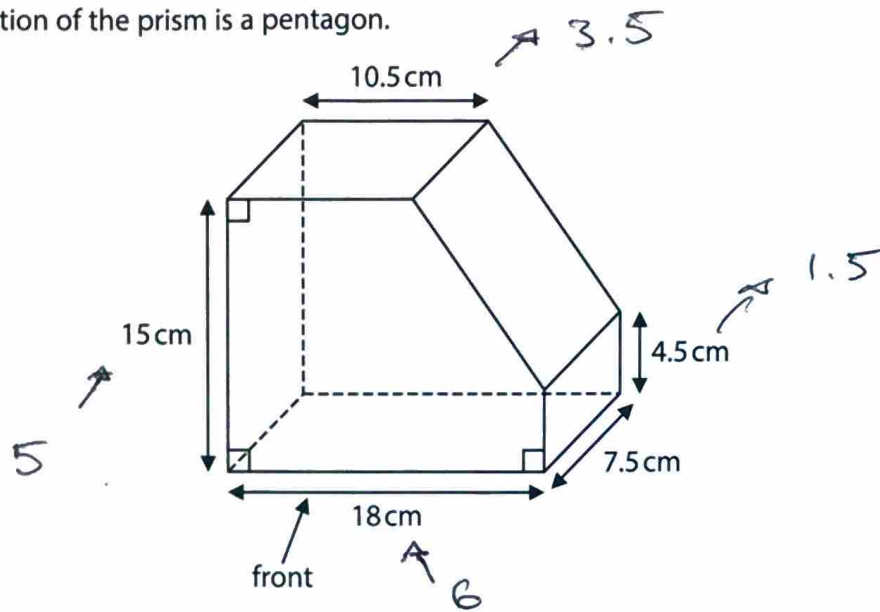
Draw the front elevation of the prism on the grid.
Use the scale 1 : 3

(3)

Key
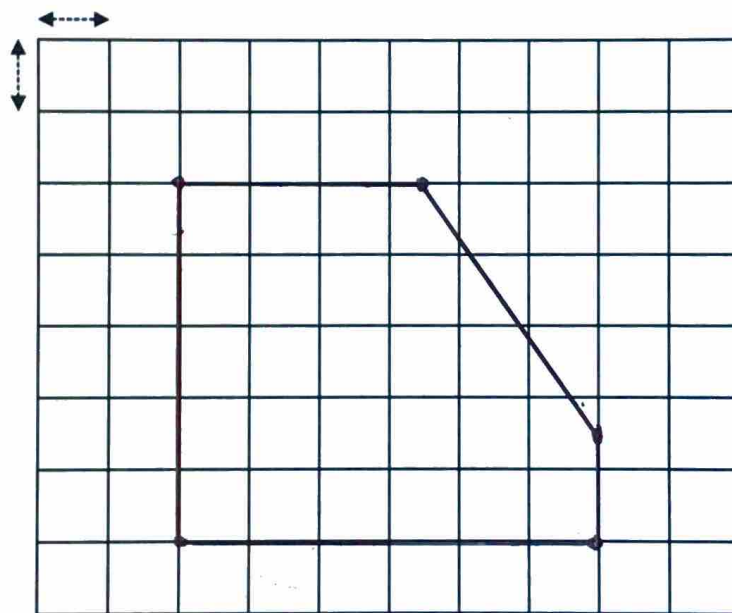
←----→ 1cm on the page

(Total for Question 4 is 3 marks)

5 Olga has this sketch of the paths in a park.

B

½ mile

4¼ miles

A

5½ miles

¼ mile

2¾ miles

F

2¼ miles

¼ mile

Entrance

1¾ miles **D**
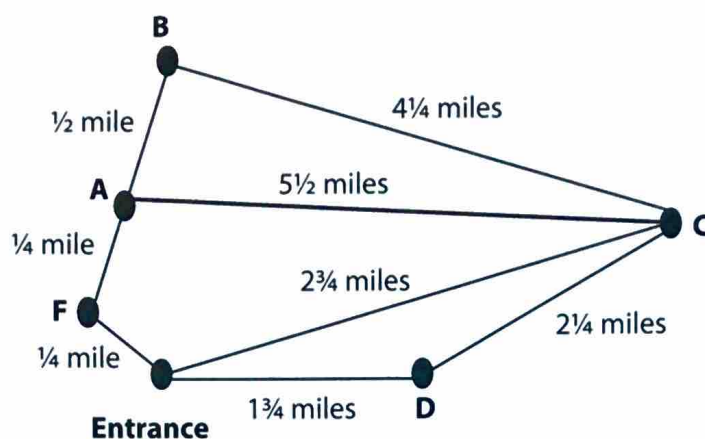
She wants a cycle route that

- starts and ends at the entrance

- goes through point C at least once

- has a total length between 15 **kilometres** and 20 **kilometres**.

1 km = 0.6 miles.

Plan a suitable route.
Work out the total distance of the route.

(5)

$$E \rightarrow D \rightarrow C \rightarrow A \rightarrow F \rightarrow E$$

$$1.75 + 2.25 + 5.5 + 0.25 + 0.25$$

$$= 10 \text{ miles}$$

$$\frac{10}{0.6} = 16.67 \text{ km}$$

Route   E D C A F E

Total distance   16.67 km

(Total for Question 5 is 5 marks)

6 Here is a cube of side length 2.5 cm.
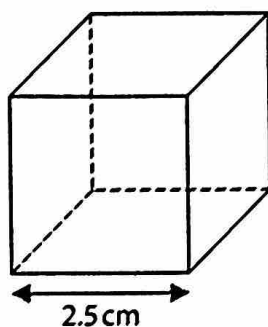
2.5 cm

Work out the surface area of this cube.

(3)

$$2.5 \times 2.5 = 6.25 \text{ cm}^2$$

$$6 \times 6.25 = \underline{37.5 \text{ cm}^2}$$

37.5 cm²

(Total for Question 6 is 3 marks)

7 Megan is the manager of a computer shop.
She organises a sale with 18% off all tablets.

Megan changes the price of one tablet from £389 to £330.98

(a) Has Megan changed the price correctly?

(3)

£389 × 0.82 = £318.98

so megan is incorrect

£318.98

✓

(b) Use estimation to show a check of your answer.

(1)

$$\frac{80}{100} \times 400 = £320$$

(Total for Question 7 is 4 marks)

8 A team of workers deliver identical fridges.

The team will use the average time to fully load an old lorry to predict the time to fully load a new lorry.

The table shows the times it took to fully load the old lorry with 24 fridges.

Time (mins)	52	60	55	59	54	63	56

The diagram shows the space available for fridges in the new lorry.
The space is in the shape of a cuboid.

2400 mm

13600 mm
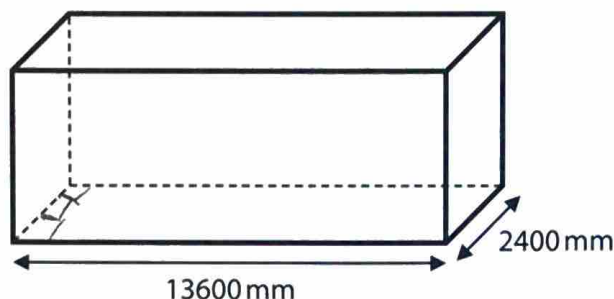
Each fridge needs a rectangular floor space 1000 mm by 800 mm.

The team do not stack fridges.

They think it will take less than 90 minutes to fully load the new lorry.

Are they correct?

(6)

$52 + 60 + 55 + 59 + 54 + 63 + 56 = 399$

mean $\Rightarrow \dfrac{399}{7} = 57$ mins

$13.6 \times 3 = 39$ fridges $= $ max capacity

$\dfrac{57}{24} \times 39 = 92.625$ mins

so they are incorrect

NO ≈ 92 mins

(Total for Question 8 is 6 marks)

9 Louis makes a cake.
The cake is in the shape of a cylinder with diameter 14 inches.
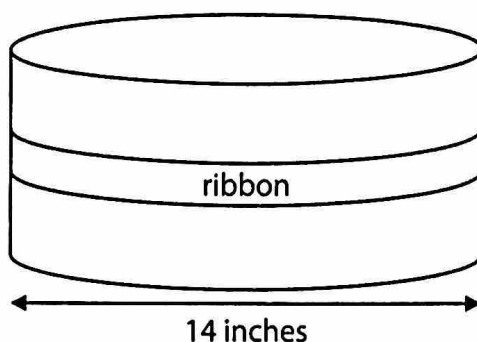
14 inches

Louis needs to put a ribbon around this cake.
The ribbon will go around the cake once with a 6 inch overlap.

Louis has a piece of ribbon 48 inches in length.

Is this piece of ribbon long enough for this cake?
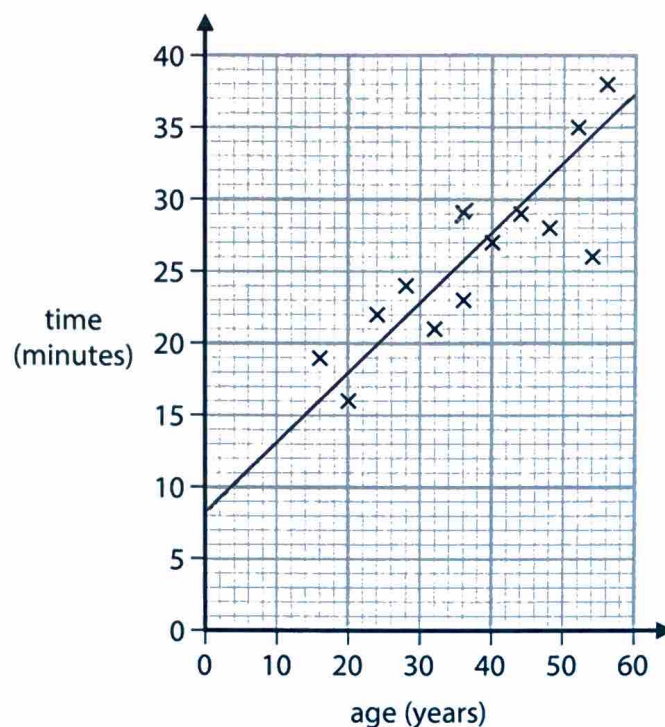
(3)

$\pi D = \pi \times 14 = 14\pi = 43.98$ in

$43.98 + 6 = 49.98$ inches

So she does not have a long enough ribbon

49.98 inches

(Total for Question 9 is 3 marks)

10 The scatter diagram shows some information about 12 athletes who have run a race.

Here is the information for another athlete

• age 36, time 29 minutes.

(a) Plot this information on the scatter diagram.

(1)

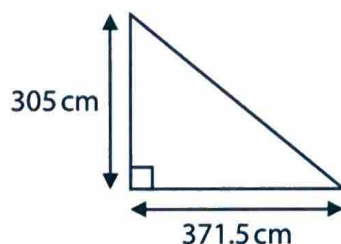(b) Draw the line of best fit on the scatter diagram.

(1)

(c) Describe the relationship shown in this scatter diagram.

(1)

Strong positive correlation

(Total for Question 10 is 3 marks)

11 George will cover part of a floor with tiles.
The part of the floor is in the shape of a triangle as shown.

305 cm

371.5 cm

George buys tiles in packs.
Each pack covers 1 m² and costs £39.95

The tiles can be cut and joined.
George gets $\frac{1}{3}$ off the cost of the packs of tiles.

Work out the lowest cost of the tiles for George.

(5)

$$3.05 \times 3.715 = 11.33 \, m^2$$

George needs 12 packs

$$12 \times £39.95 = £479.40$$

$$£479.40 \times \frac{2}{3} = \underline{£319.60}$$

£ 319.60

(Total for Question 11 is 5 marks)

12 Gabi wants to buy a flat.
The cost of the flat is £175 000

The bank uses this formula to work out the mortgage Gabi can get.

$$M = 4.625A$$

M = mortgage (£)
A = annual income (£)

Gabi has an annual income of £34 000
She will have to pay a deposit for the flat.
The deposit is the difference between the cost of the flat and the mortgage.

(a) Work out the deposit Gabi will have to pay.

(3)

$$M = 4.625 \times 34,000$$
$$= £157,250$$

$$£17,750$$

£ 17,750

Gabi invests £4000 for 3 years.
The investment earns 2% compound interest per annum.

(b) Work out the value of the investment at the end of 3 years.

(3)

$£4000 \times 1.02^3 = \underline{4244.83}$

£ 4244.83