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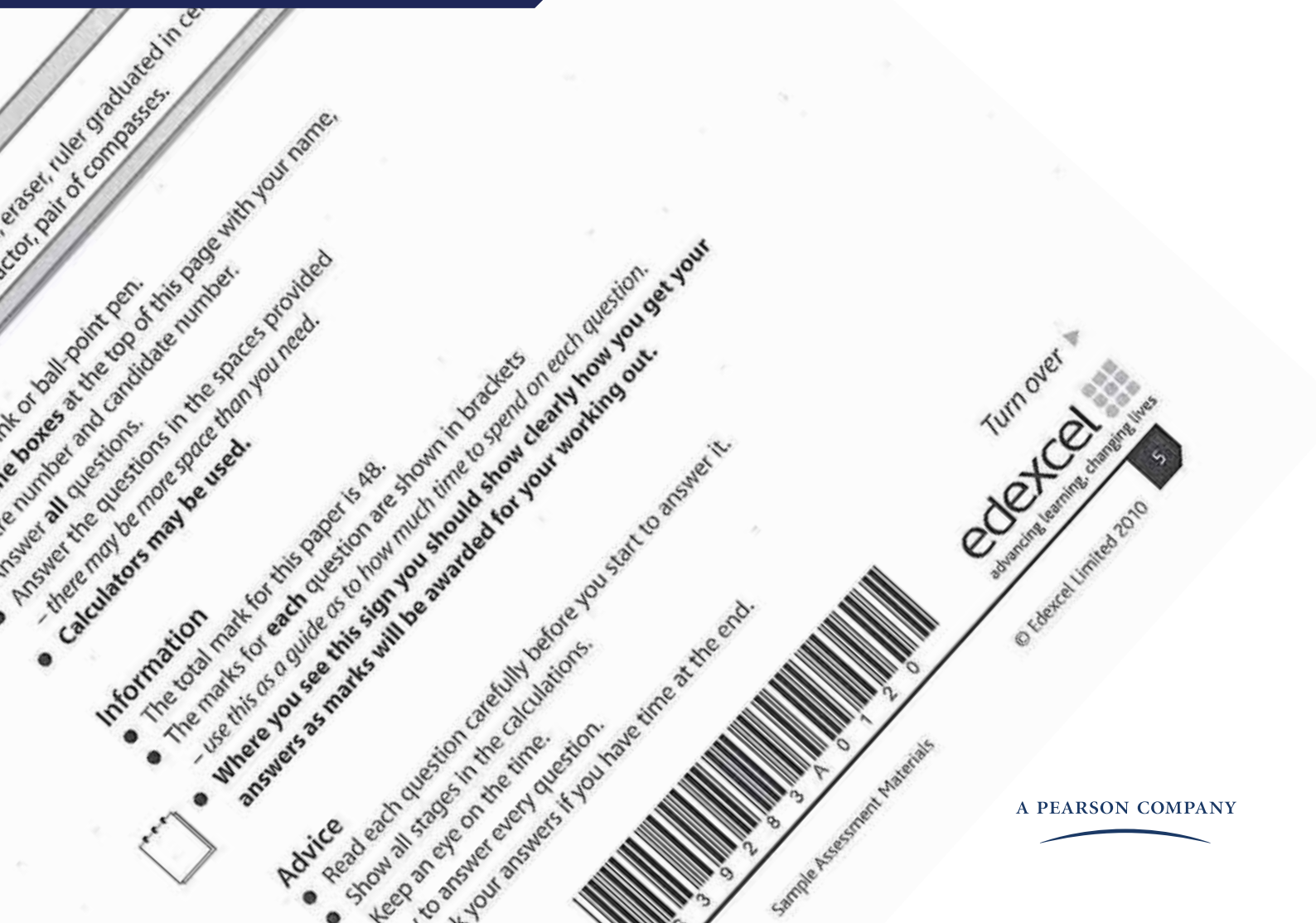
# Sample Assessment Material

## with example answers and examiner marks

These marked sample sssessement papers are to aid in teaching and learning and should be used as a guide only.




A PEARSON COMPANY

Write your name here

| Surname | Other names |
|---|---|
| | |

**Edexcel Functional Skills**

| Centre Number | Candidate Number |
|---|---|
| 1 3 1 2 0 | |

# Mathematics

## Level 2

Sample Assessment Material
**Time: 1 hour 30 minutes**

Paper Reference
**FSM02/01**

**You must have:**
Pen, calculator, HB pencil, eraser, ruler graduated in centimetres and millimetres, protractor, pair of compasses.

Total Marks
38

## Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- 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.*
- **Where you see this sign you should show clearly how you get your answers as marks will be awarded for your working out.**

## Advice

- Read each question carefully before you start to answer it.
- Show all stages in the calculations.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

*Turn over* ▶

S39282A



S 3 9 2 8 2 A 0 1 2 0

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What should the correct **Total claim** be? (4)

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

28 × 29 = £8·12 ✓

4·80 + £3·40 ✓ = £8·20

122·50 + £8·12 + 8·20 ✓ = £138·82 ✓

(4)

**(Total for Question 1 = 4 marks)**

Draw a chart or table to show the times and rooms for the 5 people being interviewed. (4)

Use the box below to show your answer clearly.

| | | Ali | Ben | Charlie | Dan | Erica |
|---|---|---|---|---|---|---|
| 9.00 | 15mins | Room 1 | Room 2 | Room 3 | Waiting | Waiting |
| 9.15 | 5min | | | | Room 1 | Room 2 |
| 9.20 | 15min | R 3 | Waiting | Waiting | R 1 | R 2 |
| 9.35 | 5min | | | | | |
| 9.40 | 15mins | R 2 | R 1 | Waiting | R 3 | Waiting |
| 9.55 | 5mins | | | | | |
| 10.00 | 15 mins | Waiting | R3 | R 1 | R 2 | Waiting |
| 10.15 | 5 mins | | | | | |
| 1030 | 15 mins | Waiting | Waiting | R 2 | Waiting | R 1 |
| 1045 | 5mins | | | | | |
| 1050 | 15 mins | Waiting | Waiting | Waiting | Waiting | R 3 |

Should be 10:20

All people allocated to rooms.
All criteria met.
Error in last three times.

2 + 1 = (3)

**(Total for Question 2 = 4 marks)**

(b) Which job pays the most money? (6)

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

Able Computer Sales = £23,000 ✓

Beta IT Support = £23,400 ✓

Compu Systems = £1800 × 12 = £21600

£22000 ÷ 100 = £220 ✓

£21600 + £220 (×12) = £21,820

missing.

Digital Hardware = £20,000 ÷ 100 × 20

= 4000 ✓

£20,000 + 4000 = £24,000 ✓

3 + 2 = (5)

Digital Hardware

- All converted to yearly salaries for comparison
- Compu systems - commission worked out correctly but only added on at end - should have been included each month.
- Correct decision made for candidate's figures.

**(Total for Question 3 = 8 marks)**

The height of the hedge is **3 m**.

Should the council order the neighbour to cut the hedge? (3)

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

NO because the maximum height for this hedge is 4·6 m. (√ft)

This is a correct decision for the candidate's value of 4·6m so gains a mark.

0 + 1 = (1)

**(Total for Question 4 = 3 marks)**

The council wants to buy another van of the same make and model to deliver meals.

One van is 2.5 years old.

(b) How much should the council expect to pay for the van? (2)

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

2 years £9800
3 years £8500
£18300 ÷ 2 = £9150

(a)
Graph - a bar graph is not appropriate - the candidate should have drawn a line graph or scatter graph

(b)
Calculation - the candidate has used the values in the table to calculate a linear midpoint and arrives at an appropriate estimate.

0 + 2 = (2)

**(Total for Question 5 = 5 marks)**

Jenny has to reduce the cost of grit mixture for the council.
She recommends changing to the following mixture.

**Jenny's mixture**

Grit mixture has a salt content of 25% by weight.

The council will still use 300 tonnes of this grit mixture **each day** the roads are icy.
The cost of materials has **not** changed.

It is predicted that there will be **29** days in 2010/11 when the roads are icy.
Jenny compares the cost of her plan with last year's plan for 29 days.

Jenny says her plan will cost less than last year's plan.

**(b)** What is the difference in cost for the council if they use Jenny's mixture for 2010/11? **(6)**

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

300 ÷ 4 = ✓ 75 tonnes of salt

75 × 29 days = 2175 × £71.95 = £156,491.25 ✓

300 − 75 = 225 tonnes of sand

225 × £12.21 = £2747.25 × 29 = £79670.25 ✓

£156491.25 + £79670.25 = £236161.5 ✓

• All calculations are fully correct.

£3519695 − £236161.5 = £3,283,533.5

(✓)

• candidate's yearly total found in (a) was incorrect but has been used correctly.

3 + 2 = (5)

**(Total for Question 6 = 8 marks)**

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

**(Total for Question 7 = 4 marks)**

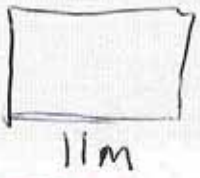
Jeba can cover 0.25 $m^2$ of the vegetable plot with 1 litre of compost.

The vegetable plot is a rectangle which measures 11 m by 7 m.

| |
|---|
| 1 litre = 1000 $cm^3$ |
| 1000 litres = $1m^3$ |

(c) Can Jeba cover all of the vegetable plot with compost from **one** compost bin? (4)

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




$A = 7 \times 11 = 77m^2$ ✓
correct area

2995.2 $m^3$

$1m^2 = 4$ litres

$\times 77$ ( ↓ $77m^2$ $308$ litres ) $\times 77$ ✓

number of litres needed for the plot correctly worked out.

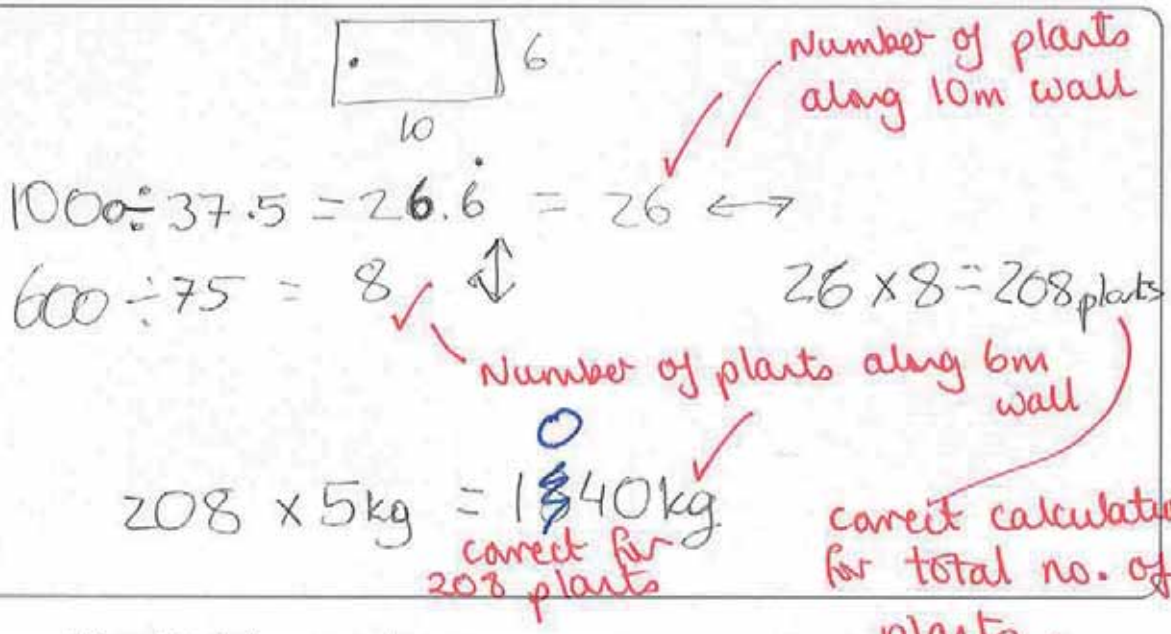
Incorrect number of $m^3$ from candidate's volume in (a)

1 + 2 = (3)

Yes

**(Total for Question 8 = 9 marks)**

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




3

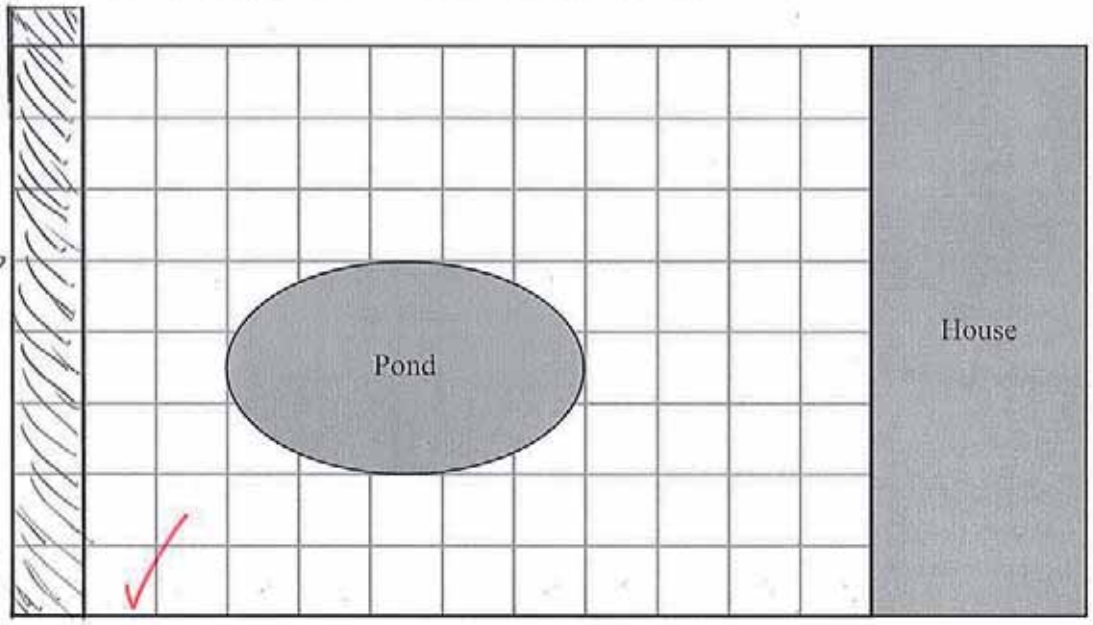
You can use this grid to help you work out your answer.

**(Total for Question 9 = 3 marks)**

**TOTAL FOR PAPER = 48 MARKS**

Lucy wants to plant a hedge in her garden.

She draws a plan of her garden on a centimetre squared grid.




Key: 1 cm on the plan = 1 m in the garden

The hedge will be 1 m wide and 8 m long.
The hedge will be in the shape of a rectangle.
The hedge will run parallel to the house at the bottom of the garden.

(c) Show the hedge on Lucy's plan. (2)

(2)

Lucy wants to know the height allowed for her hedge.

(d) What is the height allowed for Lucy's hedge? (2)

Use the box below to show your calculations.

Distance in metres between house and hedge → divide by 2 → add 1 metre.

11cm ÷ 2 = 5.5cm + 1 metre

1cm = 1m therefore.

11cm = 11m ; 5.5cm = 5.5m + 1m

= 6.5 metres

(2)

- correct value of 11m used
- correct calculation

**(Total for Question 2 = 7 marks)**