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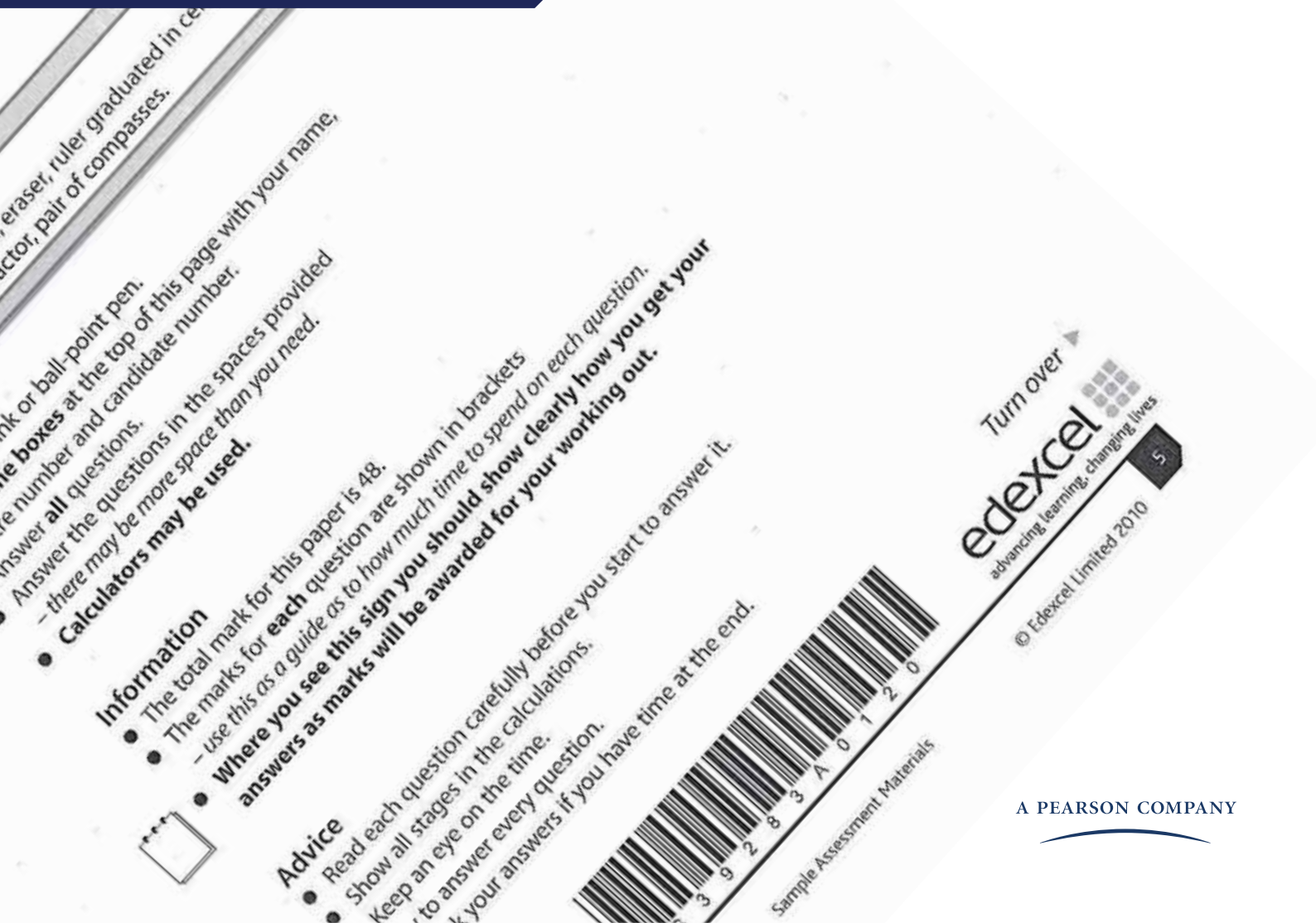
Sample Assessment Material

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

Mathematics

Level 1

Sample Assessment Material
Time: 1 hour 30 minutes

Paper Reference
FSM01/01

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

Total Marks
34

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 ▶

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SECTION A: Mid-shire Council

Answer all questions in this section.

Write your answers in the spaces provided.

1 Mid-shire Council is planning a charity meal.
The meal will have a first course, a second course and a third course.
People will choose what they want for each course.

First course: Soup **or** Salad.

Second course: Curry **or** Pasta Bake.

Third course: Cake **or** Ice cream.

The waiting staff need a data collection sheet to record the meal choices of each person.
A record of the meal choices is needed for each table.
There will be **5** people sitting at each table.

Design a data collection sheet to record the meal choices for one table. (3)

	Table 1	Table 2	Table 3
Soup or Salad	111	1111	1
	11	1	1111
Curry or Pasta Bake	1111	1111	1
	1111		1111
Cake or Ice cream		1111	111
	1111	1	11

see over

Use the box below to show clearly your data collection sheet.

	Table 1.	
Soup or Salad	III	3
	II	2
Curry or Pasta bake	IIII	4
	I	1
Cake or Ice cream.		0
	IIII	5

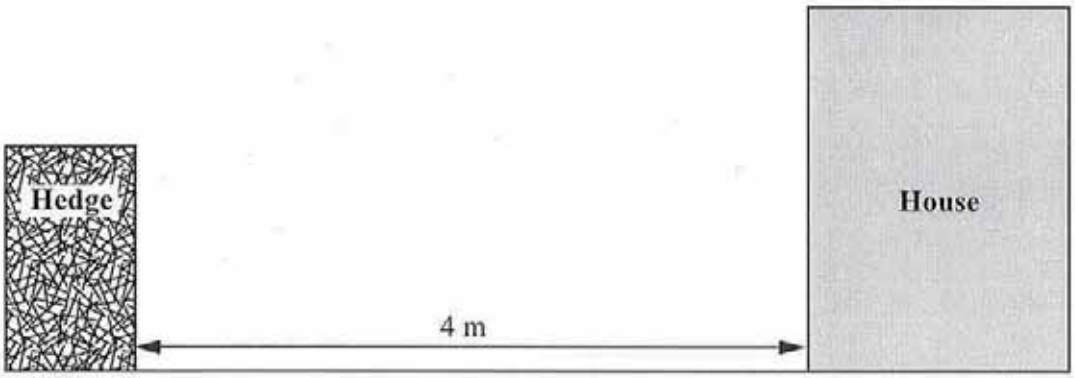
• Choices can be recorded per table but not per person

(2)

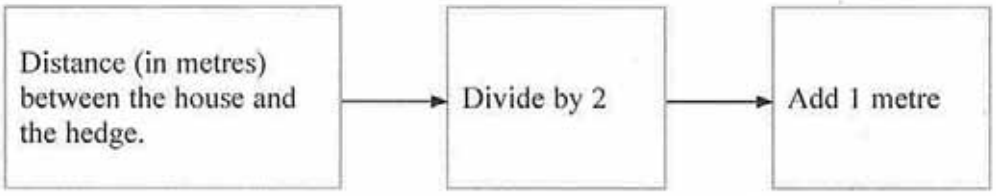
(Total for Question 1 = 3 marks)

2 A man has complained to Mid-shire Council.
He thinks that his neighbour's hedge is too high.

If the hedge is too high, the council can order the neighbour to cut the hedge.



To find the height allowed for a hedge, the council uses the rule below.



The distance between the house and the hedge is 4 m.

(a) What is the height allowed for the hedge? 3.0 metres ✓ (2)

Use the box below to show your calculations.

4 ÷ 2 = 2 + 1 = 3.0 metres ✓ (2)

The height of the hedge is 3.5 m.

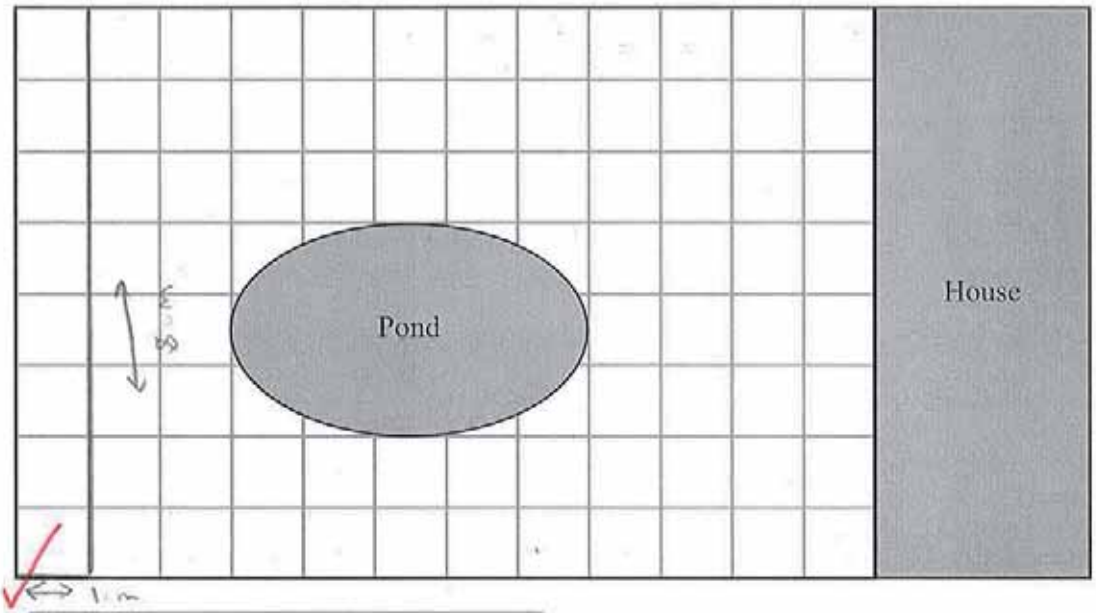
(b) Should the council order the neighbour to cut the hedge? (1)

Use the box below to explain your answer.

Yes, because it's 50 cm taller ✓ that allowed so it can be ordered to be cut down. (1)

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? 7.0m (2)

Use the box below to show your calculations.

should be 11m

12 m = distance from hedge to house.

12 ÷ 2 = 6 + 1 = 7.0 m. is allowed.

correct method is clearly shown

(1)

(Total for Question 2 = 7 marks)

3 Mid-shire Council spreads grit on the roads when the temperature is low.
The council want to predict how much grit they will need.

The table below shows the predicted number of days at different temperatures for next winter.

Temperature (°C)	Number of days
Above 0°C	44
0 to –5	4
–6 or below	19

Mid-shire Council spreads grit on the roads when the temperature is **0°C or less.**

(a) How many days will the council spread grit on the roads? 23 days. ✓ (1)

0 to −5 = 4
−6 or below = 19
4 + 19 = 23 ✓ (1)

The council uses a mixture of salt and sand to make the grit.

The mixture is **1** part salt to **4** parts sand.

The council needs 250 tonnes of mixture each day when the temperature is low.

(b) How much salt and how much sand are used to make **250 tonnes** of this mixture? (2)

Use the box below to show your calculations and your answer.

250 = 5 parts
250 ÷ 5 = 50 = 1 part ✓
250 − 50 = 200 = 4 parts.
correct method and calculation (2)
Salt = 50 tonnes ✓
Sand = 200 tonnes ✓

The council needs 250 tonnes of mixture for **each day** that grit is spread on the roads.

The council must estimate the cost of the grit needed for next winter.

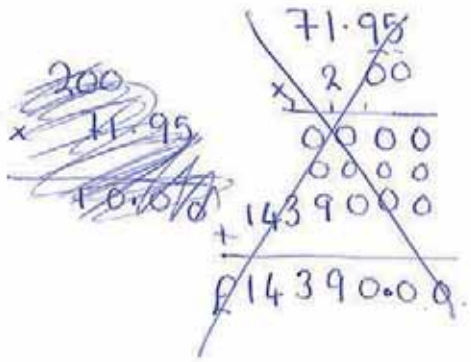
Salt costs £71.95 per tonne.

Sand costs £12.21 per tonne.

(c) Calculate an estimate for the cost of grit needed for next winter for Mid-shire Council. (3)

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

Salt = £3597.50



71.95 ✓
× 50
0000
£3597.50 ✓

Sand: 12.21 ✓
× 200
0000
0000
+24420 0
£2442.00

Sand = £2442.00 ✓

0

The candidate has found the correct cost for salt and the correct cost for sand but has then stopped.
No use has been made of the 23 days.

(Total for Question 3 = 6 marks)

SECTION B: Jobs

Answer all questions in this section.

Write your answers in the spaces provided.

4 Barry interviews people for jobs.

He can interview up to **10** people each day.

A computer company wants Barry to interview **62** people.

(a) What is the least number of days that Barry will need for these interviews? (2)

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

$62 \div 10 = 6 \cdot 2$

60 people = 6 days

2 people = 1 day.

6 + 1 = 7 days.

(2)

(b) Show how you can **check** your answer in the box below. (1)

6 days × 10 = 60

2 people + 1 more day.

60 + 2 = 62 6 + 1 = 7.

62 people in 7 days.

(1)

(Total for Question 4 = 3 marks)

5 Barry has been asked to compare the pay for two jobs.

Able Computer Sales	Beta IT Support
Marketing Manager	**Sales Assistant**
Pay: £25 000 per **year**	Pay: £1750 per **month** + bonus of 20% of monthly pay

Which job pays more? Able computer sales. (✓) (4)

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

Able Computer Sales

pay £25,000 per year.

£25,000 per year. ✓

Beta IT Support.

pay 1750 per month + 20% bonus monthly pay.

1750 + 20% = 1750 (+ 87.5) = 1,837.5 for 1 month.

1,837.5 × 12 ✓

20% calculated incorrectly

attempt to work out annual salary.

1837.5 × 12 = 36750 + 183750 = 22050.0

£22,050 per year.

1 + 1 = (2)

correct decision based on candidate's figures

(Total for Question 5 = 4 marks)

6 Barry helps people plan which days they work.
He helps Jeba plan her work for three weeks.

Jeba works for two companies, Compulike (C) and Easytype (E).

Jeba is paid £550 for **four** days work at Compulike.

She is paid £110 for **each** day of work at Easytype.

(a) Which company pays Jeba more for her time? (1)

Use the box below to explain your answer.

4 days £550 for C

110 × 4 = £440 of

4 days = £440 for E

C pays more. ✓ (1)

Barry has a choice of two plans for Jeba. The plans are shown below.

Plan 1

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1		C	E	C	E
Week 2			C	E	
Week 3	C			E	

Plan 2

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1		E		C	E
Week 2	C		C	E	E
Week 3		C	E		

Jeba wants to earn as much money as she can.

(b) Which plan should Jeba choose? Explain your choice. Calculate her total pay for this plan. Plan 2. (3)

Use the box below to show your answer and calculations.

Plan 1. Over 3 weeks

C × 4 = 550 × 4 = 2200

E × 4 = 440 × 4 = 1760

2200 + 1760 = £3,960

Plan 2. Over 3 weeks

C × 4 = 550 × 4 = 2200

E × 5 = 440 × 5 = 2200

2200 + 2200 = £4,400

No. of days in each plan is correct but pay is then wrongly calculated (1)

(Total for Question 6 = 4 marks)

7 Maria is interviewed for a job. She hands in this claim form.

Claim form
Complete all totals.

Reason for claim:	Details:	Total:
Train fare:	**Return ticket**	£ 121.50
Car travel:	30 miles at 27p per mile	£ £810.00 ✗
Travel refreshments:	£4.80 £3.40	£ 8.20 ✓
	Total claim	£ 939.76

(a) Complete the claim form for Maria. (3)

Use the box below to show any calculations.

30
×27 ✓
210
600
£810.00
units incorrect 8100p or £81

£ 4.80
£ + 3.40
£ 8.20 ✓

121.50
810.00
+ 8.20
939.70 (✓) but wrong value used

(1)

This claim form is out of date.

Car travel is now 29p per mile.

(b) How much **extra** should Maria claim for car travel? £60.00 (2)

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

30 ·
×29
270
+600 ✓
£870.00

£70.00
− £10.00
£60.00

£60.00 more . ✗

Units incorrect, overall method is correct

(1)

(Total for Question 7 = 5 marks)

SECTION C: Jan

Answer all questions in this section.

Write your answers in the spaces provided.

8 A theme park has shows and rides.

The table below gives the start time and the length of show for four shows.

show	start times (pm)				length of show (mins)
High Summer		1.15	3.00		45
Timmy Boo	12.00	2.45		4.15	20
The Sea Lion Show	12.15	1.30	3.00	4.40	35
Warrior Show		1.30	3.00		35

Jan wants to take her nephew to see all four shows.

She wants to see each show from start to finish.
She wants to leave the theme park by 5pm.

Show how Jan and her nephew can see all four shows. (4)

High Sumer @ Start 1:15 + 45 mins. = 2:00 O'clock.
Timmy Boo Start 2.45 + 20 mins = 3:05 O'clock.
The Sea Lion Show Start 4.40

Timmy Boo = Start 12:00 +20 mins finish 12+20
High Summer - Start 1.15 +45 mins finish 2:00

The Sea Lion show 12:15 to 12:50 ✓
High Summer 1:15 to 2:00 ✓
Warrior Show 3:00 to 3:35 ✓
Tommy Boo 4:15 to 4:35 ✓

5:00 leave.

(4)

Use the box below to show your answer.

1. The Sea lion show.
2. High summer.
3. Warrior show.
4. Tommy Boo

(Total for Question 8 = 4 marks)

9 Jan wants to choose a digital TV package.
Jan's three options are shown below.

Package	One-off joining fee	Monthly cost
1	£30.00	£24.99
2	£15.00	£15.00 per month for the first 3 months then £29.35 each month
3	None	£36.00

Compare the cost of the three TV packages for one year.
Which package is best for Jan?

Package 2. ✓ (5)

Use the box below to show your calculations and comparisons.

1. 24·99 × 12

49 98
+ 249 90
£299·88 for 1 year.

299·88
+ 30·00
£329·88 with one off joining fee ✓

2. 15·00 × 3
45·00

29·35 × 9
2 6 4 · 1 5

264·15
+ 45·00
309·15 for 1 year.

3+2 = 5

309·15
+ 15·00
324·15 with one-off joining fee. ✓

3. 36·00 × 12

7200
+ 36000
£432·00 for 1 year. ✓

Fully correct.

(Total for Question 9 = 5 marks)

10 Jan wants to reduce her water bill.
She fills in this chart for **one week**.

	Tally
shower	𝍸 I
toilet	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II
washing machine	IIII

Key: 𝍸 = 5

Jan finds the following information on a website.

	Litres used
shower (per shower)	30
toilet flush (per flush)	10
washing machine (per use)	100

Jan uses 40 litres of water **per day** for other things, such as cooking, washing up, drinking, and cleaning her teeth.

(a) How much water does Jan use in **one week**? 1230 Litres ✓ (3)

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

Shower

30
×1 6 ✓
190 litres

toilet

37 ✓
× 10
370 litres

Washing machine

4 × 100 = 400 litres ✓

Other.

40 litres per day.

40
7
280 litres. ✓

(3)

180
370
400
+280
1,230 litres ✓ in one week.

Jan wants to know if her water bill would be cheaper if she had a water meter.
She assumes she uses the same amount of water each week.
Jan finds out some information about water charges.

With water meter:	Fixed charge per year £22 **plus** £1.10 for every 1000 litres of water used.
Without water meter:	Fixed charge of £120 per year

(b) Would Jan's water bill be cheaper if she had a water meter? With ✓ (4)

Use the space below to show how you get your answer.

With

£22 per year

+ 1.10 per 1000 litres ✓

22 ✓

92.40

£114.40 per year.

£23.10 with one weeks water usage

Without £120 per year ✓

not clear where this figure has come from - all calculations should be shown so marks can be awarded.

0+2 = (2)

(Total for Question 10 = 7 marks)

TOTAL FOR PAPER = 48 MARKS