

Sample Assessment Material

with example answers and examiner marks

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

eraser, ruler graduated in centimetres, pair of compasses.

ink or ball-point pen.
The boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
- there may be more space than you need.

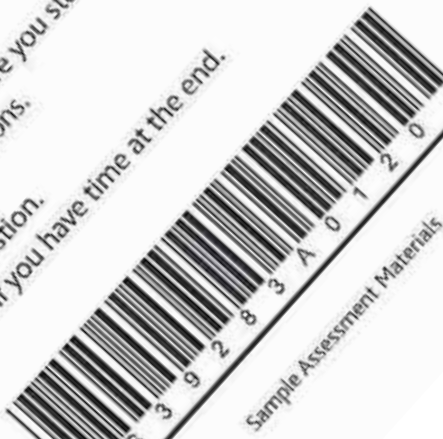
Calculators may be used.

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.
- Mark your answers if you have time at the end.



Sample Assessment Materials

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Write your name here


Surname	Other names
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Edexcel Functional Skills

Centre Number	Candidate Number
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Mathematics

Level 1



Sample Assessment Material Time: 1 hour 30 minutes	Paper Reference FSM01/01
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You must have: Pen, calculator, HB pencil, eraser, ruler graduated in centimetres and millimetres, protractor, pair of compasses.	Total Marks 43
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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.
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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.

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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)

3 courses

Person	First course	Second course	Third course
Person 1	soup	Salad	
Person 2			
Person 3			
Person 4			
Person 5			
Total			

Person	1st Course	2nd course	3rd course
Person 1	soup $\frac{1}{5}$ salad $\frac{4}{5}$	Curry $\frac{1}{5}$ Pasta $\frac{4}{5}$	cake $\frac{1}{5}$ Ice cream $\frac{4}{5}$
Person 2			
Person 3			
Person 4			
Person 5			
Total			

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

Person	1st course		2nd course		3rd Course	
	Soup Y/N	Salad Y/N	Curry Y/N	Potatoes Y/N	Cake Y/N	Ice cream Y/N
Person 1						
Person 2						
Person 3						
Person 4						
Person 5						
Total						

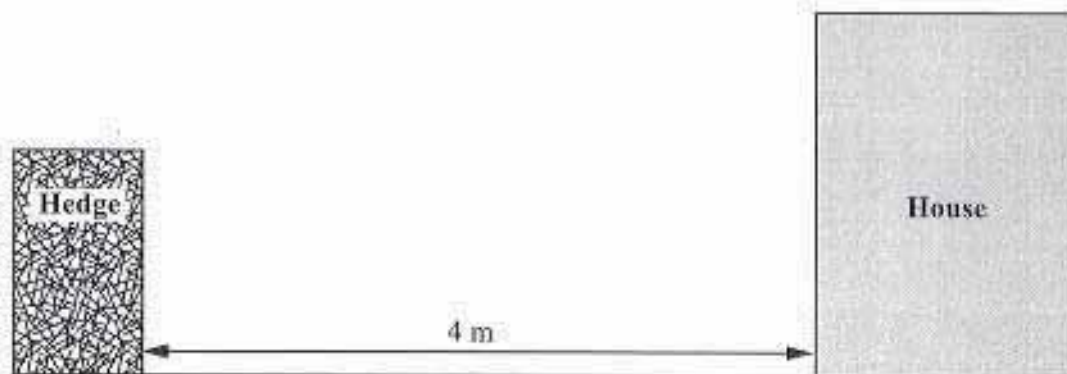
All features present

3

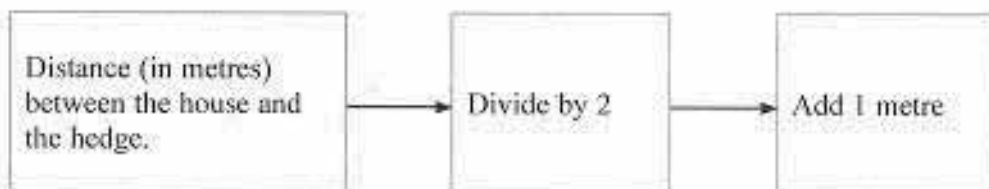
(Total for Question 1 = 3 marks)

- 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? (2)

Use the box below to show your calculations:

$4\text{ m} \div 2 = 2\text{ m}$ ✓
 $2\text{ m} + 1\text{ m} = 3\text{ m}$ ✓

3 m ✓ (2)

The height of the hedge is 3.5 m.

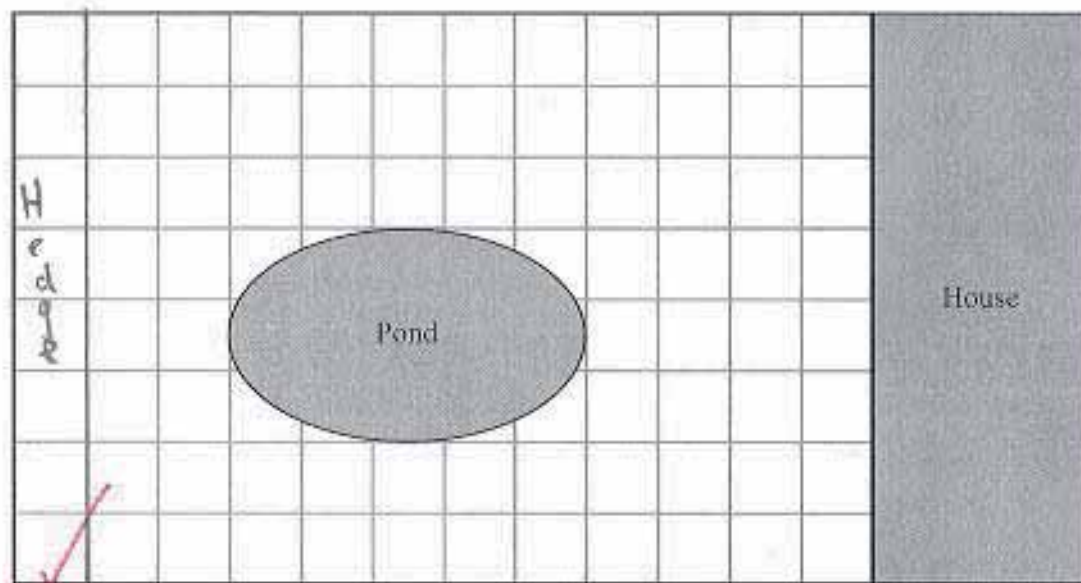
- (b) Should the council order the neighbour to cut the hedge? (1)

Use the box below to explain your answer.

Yes ✓ because the hedge should be 3 metres tall but it is 3.5 metres tall. (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?

(2)

Use the box below to show your calculations.



$$11 \text{ m} \div 2 = 5.5 \text{ m}$$
$$5.5 \text{ m} + 1 = 6.5 \text{ m}$$

$$6.5 \text{ m}$$

- correct use of 11m
- correct calculation

2

(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 ($^{\circ}\text{C}$)	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** ✓ (1)

$$19 + 4 = 23$$

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? **200 tonnes of sand and 50 tonnes of salt** (2)

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

$$\text{Ratio } 1:4$$

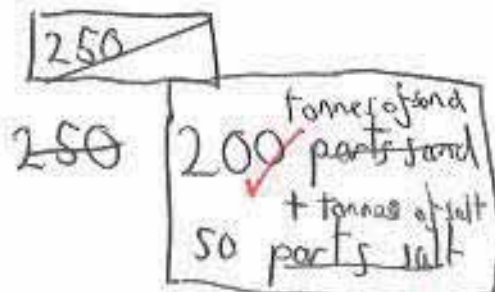
$$1+4=5$$

$$5 \times 50 = 250$$

$$1 \times 5 = 5 \quad 1 \times 50 = 50$$

$$4 \times 5 = 20 \quad 4 \times 50 = 200$$

$$200 + 50 = 250$$



correct method
and answer

(2)

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.

£138,908.50

(3)

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

200 200:50 50:200 23 days
50 = £3,597.50
~~£71.95 × 200 = £14,390~~ ✓
£12.21 × 200 = £2,442 ✓
~~£12.21 + £2.4~~ £3,597.50 + £2,442 = £6,039.50
£6,039.50 per day
£6,039.50 × 23 = £138,908.50 ✓

(3)

A fully correct answer with all calculations present

(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)

70

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

~~1 day = 10
2 = 20
4 = 40
5 = 50
6 = 60~~

1 = 10
2 = 20
4 = 40
8 = 80
6 = 60
7 = 70

This is taken to be the candidate's final answer, it should have been 7.
The method is sham clearly

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

$10 \times 7 = 70$
 $70 \div 10 = 7$

(Total for Question 4 = 3 marks)

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

Able Computer Sales
Marketing Manager

Pay: £25 000 per year

Beta IT Support
Sales Assistant

Pay: £1750 per month + bonus of
20% of monthly pay

Which job pays more?

Beta IT Support ✓

(4)

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

Able computer sales = £25,000 per year

Beta IT support = £25,200

$$1750 \div 10 = 175$$

$$175 \times 2 = 350 \quad \checkmark \quad 20\% \text{ calculated correctly}$$

$$1750 + 350 = 2100 \quad \text{correct monthly salary}$$

$$2100 \times 12 = 25,200 \quad \checkmark \quad \text{correct annual salary}$$

Correct decision made supported by working.

$$3 + 1 = (4)$$

(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?

Compulike ✓ (1)

Use the box below to explain your answer.

$$\Delta \text{ Comp } C = 550 \text{ per 4 days}$$

$$E = 440 \text{ per 4 days}$$

$$110 \times 4 = 440$$

(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.

(3)

Use the box below to show your answer and calculations.

Plan 1

$$\begin{array}{l} 4 \times C = 550 \\ 4 \times E = 440 \\ \hline \text{€}990 \end{array}$$

Plan 2

$$\begin{array}{l} 4 \times C = 550 \\ 5 \times E = 550 \\ \hline \text{€}1100 \end{array}$$

She ~~could go to~~ should choose plan 2
because she earns €110 more than on
plan 1

correct calculations seen and
correct decision stated

③

(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	£ 8.10 ✓
Travel refreshments:	£4.80 £3.40	£ 8.20 ✓
Total claim		£ 137.80 ✓

(a) Complete the claim form for Maria.

(3)

Use the box below to show any calculations.



$$27p \times 30 = 810p = \text{€} 8.10$$

$$4.80 + 3.40 = 8.20 \quad \checkmark$$

$$\begin{array}{r} 121.50 \\ 8.10 \\ 8.20 \\ \hline 137.80 \end{array}$$

Fully correct.

(3)

This claim form is out of date.

Car travel is now 29p per mile.

(b) How much extra should Maria claim for car travel?

60p ✓

(2)

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

$$29p \times 30 = 870 = \text{€}8.70$$

$$27p \times 30 = 810 = \text{€}8.10$$

$$\begin{array}{r} 8.70 \\ - 8.10 \\ \hline 0.60 \end{array}$$

rewritten with units shown correctly

(2)

(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 x 3.00	45
Timmy Boo* *	12.00 x 2.45 4.15	20
The Sea Lion Show*	12.15 1.30* 3.00 4.40	35
Warrior Show x	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)

~~1.15 45, 2.00~~

~~12.00~~

~~1.30 35 = 2.05~~

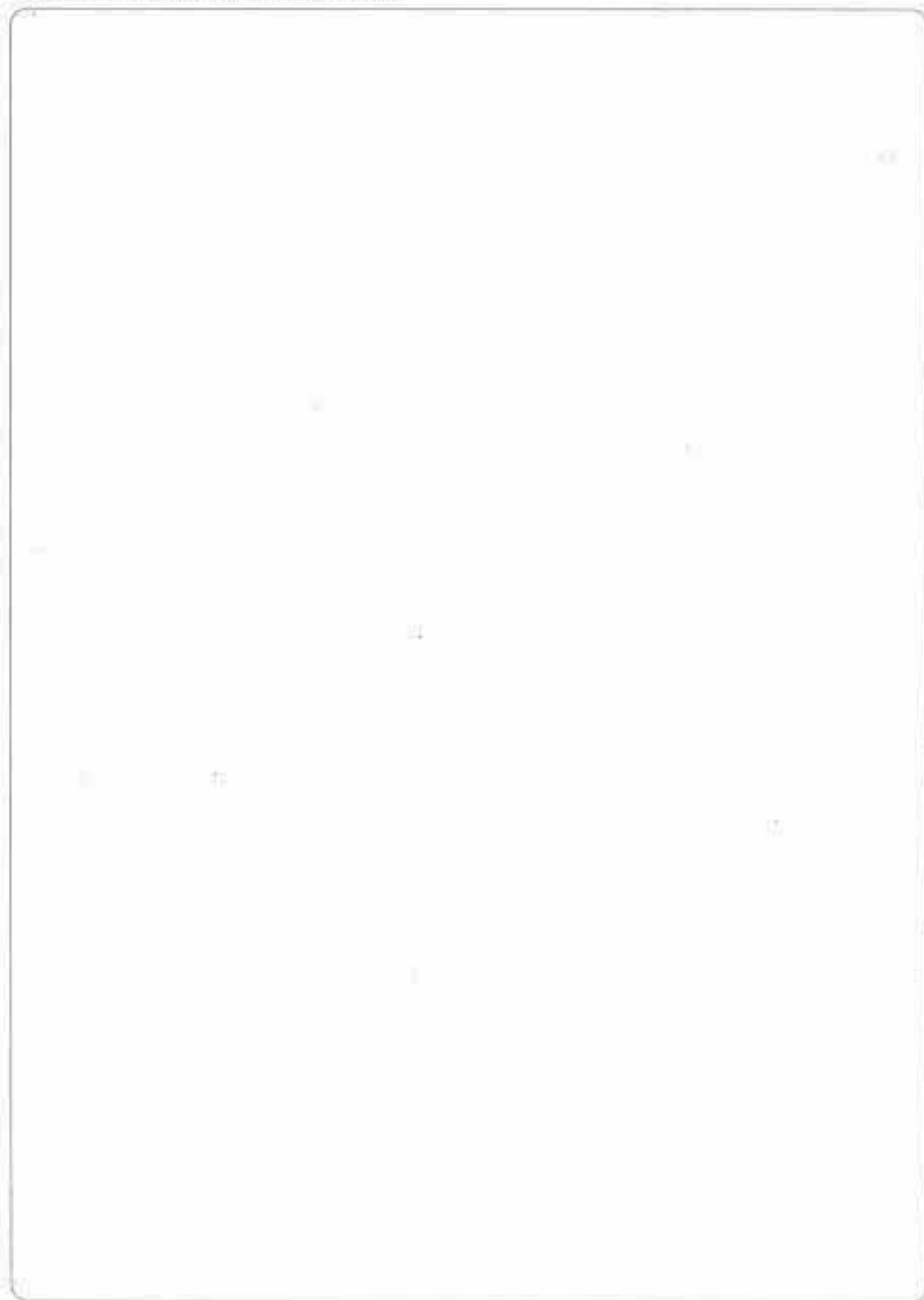
~~1.30 2.05~~

~~12.15 12.50~~

~~1.15 2.00~~

~~2.45 3.05~~

Use the box below to show your answer.



(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?

P2 Package 2 ✓ (5)

Use the box below to show your calculations and comparisons.

$$30 + 299.88$$

$$P1 = 30 + (24.99 \times 12) = \pounds 329.88 \quad \checkmark$$

$$P2 = 15 + (15 \times 3) + (29.35 \times 9) = \pounds 324.15 \quad \checkmark$$

$$P3 = 36 \times 12 = \pounds 432 \quad \checkmark$$

$$24.99 \times 12 = 299.88$$

$$15 \times 3 = 45$$

$$29.35 \times 9 = 264.15$$

$$P1 = 30 + 299.88 = 329.88$$

$$P2 = 15 + 45 + 264.15 = 324.15$$

$$3 + 2 = (5)$$

- correct calculations and cost of packages given
- correct package chosen.



(Total for Question 9 = 5 marks)

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

	Tally
shower	
toilet	
washing machine	

Key: ||| = 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**? 1230L ✓ (3)

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



$$\begin{aligned} \text{Shower} &= 30 \times 6 = 180 \text{ L} \\ \text{Toilet} &= 16 \times 37.5 = 370 \text{ L} \\ \text{Washing machine} &= 100 \times 4 = 400 \text{ L} \\ 40 \times 7 &= 280 \text{ L} \end{aligned}$$

$$\begin{array}{r} \text{SP} = 180 \\ \text{T} = 370 \\ \text{WM} = 400 \\ \text{O} = 280 \\ \hline 1230 \\ 2 \end{array}$$

(3)

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? *Yes* ✓ (4)

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

Water meter = $22 + (1.10 \times 63) = 23.10$ ✓
 None = 120

$Y = 63$ 1000s of litres

Result of 63×1.1
 69.3

$1230 \times 52 = 63,960$ — litres used per year ✓

$2 + 2 = 4$

(Total for Question 10 = 7 marks)

TOTAL FOR PAPER = 48 MARKS

