

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
LEVEL 2 FUNCTIONAL SKILLS MATHEMATICS

09866

TASK AND ANSWER BOOKLET PRACTICE PAPER 6

TIME: 1 HOUR 30 MINUTES

INSTRUCTIONS

Fill in all the boxes below. Make sure your personal details are entered correctly. Use **BLOCK LETTERS**.

Your surname or family name

Your first forename (if any)

Your second forename (if any)

Date of birth

Centre name

Centre number

Your OCR candidate number

At the beginning of this booklet you will find tear off Resource Documents. You will need to refer to these documents to complete the tasks.

You will also need:

- a pen with black ink
- a calculator
- a ruler

YOU HAVE 1 HOUR AND 30 MINUTES TO COMPLETE THE THREE TASKS

For each task, make sure that you:

- read the questions carefully before starting
- write your answers in this booklet
- clearly show how your working leads to your answers

2 marks are available in each task when you show you have checked your work.

When you have finished, hand this booklet and all the Resource Documents to the supervisor.

Ofqual Qualification Reference Number: 500/8910/9

FOR EXAMINER USE ONLY		
Question No	Mark	Total
TASK A		
	/	/20
	/	
	/	
	/	
	/	
TASK B		
	/	/20
	/	
	/	
	/	
	/	
TASK C		
	/	/20
	/	
	/	
	/	
	/	
Total	/60	

This document consists of 28 pages. Any blank pages are indicated.

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RESOURCE DOCUMENTS

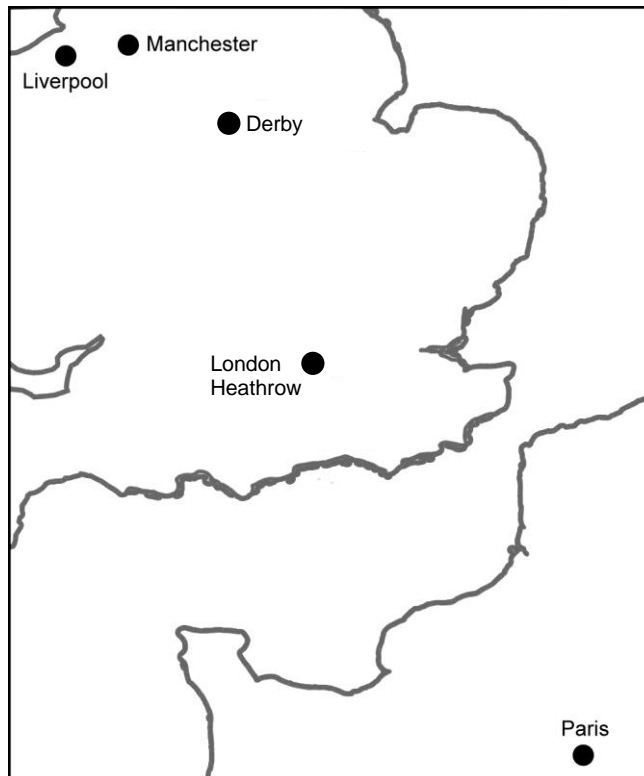
The Resource Documents on pages 5, 7, 9 and 11 contain information to help you to answer the tasks in this booklet.

- The resource documents are perforated along the left hand side, so they can be removed from the task and answer booklet.
- Your supervisor will instruct you when to remove the resource documents, before you start the assessment.
- Please fold pages 5, 7, 9 and 11 along the perforated strip before removing from the task and answer booklet.

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TASK A – TRAINS AND PLANES

RESOURCE DOCUMENT 1



Here are Mel's notes about budget airline prices to fly to Paris and back.

Liverpool to Paris

£44 £47 £71 £97 £40 £57 £70

Manchester to Paris

£68 £82 £98 £63

London Heathrow to Paris

£80 £90 £120 £113 £105 £92

Trains from Derby to Liverpool, Manchester and London airports

Derby to Liverpool airport

Trains every hour, takes about 2½ hours, 1 change, off-peak return £43.30

Derby to London Heathrow airport

Two every hour, takes about 3 hours, 2 changes, off-peak return £69.00

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**TASK A – TRAINS AND PLANES
RESOURCE DOCUMENT 2**



Carbon footprints



The Airbus A319 is a very popular passenger plane used by budget airlines.

It can carry 134 passengers.

The Airbus A319 uses about 3.5 litres of jet fuel per kilometre flown. A litre of jet fuel produces 2.5 kg of CO_2 .



Each kilometre of a rail journey produces 60g of CO_2 per passenger.

Rail distances (in km) from Derby to



Manchester	130
Liverpool	139
London Heathrow	243

Flying distances (in km) to Paris from

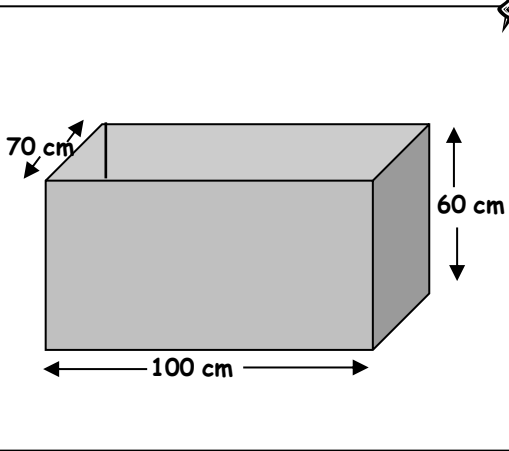


Manchester	606
Liverpool	629
London Heathrow	354

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TASK B – RAINBOW FISH

RESOURCE DOCUMENT 1



For Sale

Large aquarium - almost new £95

Buyer must collect

Tel: 01310 323252

Here is a page from Callum's diary.

Weights and Measures (cont.)

1 pint	→	≈ 0.568 litres
1 gallon	= 8 pints	≈ 4.55 litres
1 ton		≈ 1016 kilograms
1 gallon of water weighs 8.34 pounds		
1 litre	≈ 1.76 pints	≈ 0.220 gallons
1 kilogram		≈ 2.20 pounds
1 litre of water weighs 1 kilogram		
1000 ml is 1 litre		
1000 cm ³ is 1 litre		
NOTE: ≈ is the symbol for approximately equal to		

These are the lengths of adult rainbow fish owned by people in the local Aquatic Fish Club. (All the lengths are in cm)

4	10	8	10	10	9
7	6	8	15	9	8

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TASK C – BAKED POTATOES

RESOURCE DOCUMENT 1



File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History

Address

Best Buy Catering

CHECKOUT



Baked Potato Boxes 125 for £7.60

Plastic Forks 1000 for £8

Quantity:

Quantity:

**ALL PRICES INCLUDE VAT
AND
POSTAGE/TRANSPORT**

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TASK AND ANSWER PAGES

Do not turn over this page until you are told to do so by your supervisor.

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TASK A – TRAINS AND PLANES**You will need Task A Resource Document 1**

Mel lives in Derby.
She wants to visit a friend in Paris.

She looks at budget airlines on the internet.
Mel chooses three possible airports to fly from.
These are Liverpool, Manchester and London Heathrow.



She jots down the prices of return fares on the dates she wants.

Q1 (a) (i) What is the cheapest flight to Paris that Mel has found?

(1 mark)

(ii) **On average** which airport is the cheapest to fly from?
Show how you have worked out your answer.

(4 marks)

Mel has to travel from Derby to the airport she chooses.

- (b) Which airport would you recommend she uses?
Give the reasons for your choice.

(4 marks)

Mel will fly in an Airbus A319. She is worried about her carbon footprint.

- (c) (i) How much CO₂ per kilometre does an Airbus A319 produce **per person**?
Write down any assumptions you make.

(5 marks)

- (ii) What is Mel's total carbon footprint for her **one way** trip from Derby to Paris?
Show your working and any assumptions you make.

(4 marks)

Examiner
use only
(Q1)

Checking (2 marks)

Examiner
use only
(Checking)

Total marks

Examiner
use only
(Total)

END OF TASK A

TASK B – RAINBOW FISH**You will need Task B Resource Document 1**

Callum wants to buy a new aquarium to breed tropical rainbow fish.
He sees a For Sale card in the local supermarket.

Callum's guide to keeping fish states: *"before adding fish - fill your aquarium with water until the level is 2 cm below the top of the sides"*

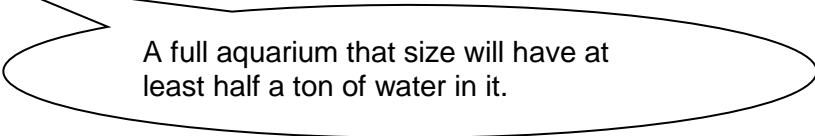
- Q2 (a) (i)** Calculate the volume of water in this aquarium when it is ready for the fish to be added.

(2 marks)

- (ii)** Calculate the weight of the water in the aquarium.

(1 mark)

Callum's friend Daljit says ...



A full aquarium that size will have at least half a ton of water in it.

- (iii)** Is Daljit correct?

Support your answer with calculations.

(2 marks)

- (b) Callum needs to work out how many rainbow fish he can put in the aquarium. If there are too many, the fish may fight or catch diseases.

He looks in some books and finds these two rules:

HOW TO FIND THE SAFE TOTAL LENGTH OF FISH TO KEEP IN AN AQUARIUM

Rule 1 - Surface area rule –1 cm length of fish for every 12 cm² of aquarium water surface area
(the surface area is the area of water in contact with the air)

Rule 2 - Volume rule - 1 cm length of fish for every 1.8 litres of aquarium water

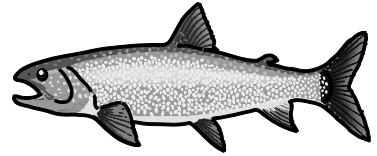
The answer to the calculation for each rule gives the total length of all the fish the aquarium will hold.

Callum uses the rule that gives the smaller safe total length of fish for this aquarium. Show which rule he should choose.

(6 marks)

- (c) Callum will buy young rainbow fish but there must be enough space for them when they become adults.

He phones some people in the local Aquatic Fish Club, who tell him the lengths of some of their adult rainbow fish.



They give him another rule, rule 3, for working out the number of fish he can keep.

$$\text{Number of fish} = \frac{\text{surface area of water}}{40 \times \text{average length of fish}}$$

- (i) How many fish will Callum be able to keep in his aquarium using rule 3?

Explain how you arrive at your answer. Show your calculations and write down any assumptions you make.

(5 marks)

- (ii) Callum will use the rule that gives the smallest number of fish for this aquarium.
Which of the three rules gives the smallest number of fish?

(2 marks)

Examiner
use only
(Q2)

Checking (2 marks)

Examiner
use only
(Checking)

Total marks

Examiner
use only
(Total)

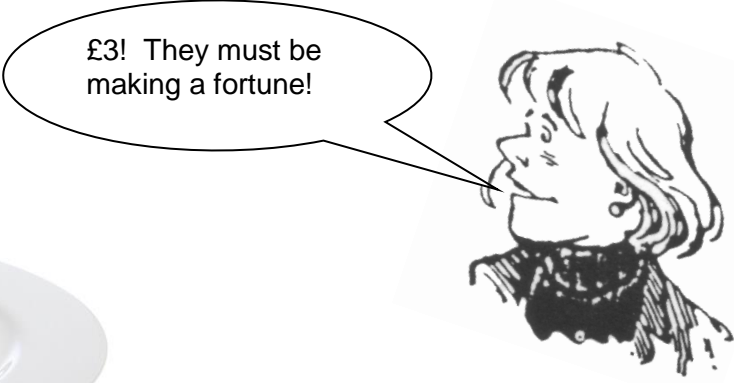
END OF TASK B

TASK C – BAKED POTATOES

You will need Task C Resource Document 1

Amy saw this in a cafe.

**Baked potato
and
Filling £3!**



Amy's aunt Emma runs a sandwich shop.
She agrees to let Amy have a space in her shop to sell baked potatoes.

Before Amy starts she works out her costs and the possible number of customers.

Emma's shop is open 5 days a week serving, on average, 800 customers per day.

Q3 (a) Amy asks some of the shop's customers if they would buy baked potatoes.
Of the 40 people she asked 11 said they would.

Estimate the number of customers per day Amy might expect to buy a baked potato.
Explain how you arrived at your answer.

This is the figure Amy will use in her plans.

(3 marks)

- (b) Baking potatoes are sold in 56 kg sacks that cost about £45 each. Each potato weighs about 250 g.

Make a rough estimate of how much it will cost Amy to buy a week's supply of potatoes.

Show your working clearly and write down any assumptions you make.

(3 marks)

- (c) Amy decides to buy this baked potato oven. She spreads this cost over a year.

Calculate roughly how much this will work out per week.



Only £535

(2 marks)

Amy will pay Emma £20 per week for electricity, heating and insurance.

Fillings for baked potatoes will cost about 20p per potato.

Amy has now to work out her total costs.



- (d) Work out Amy's **total** costs for a week.
Show all your working and any assumptions you might make.

(8 marks)

(e) Amy plans to sell the baked potatoes with fillings for £2.50 each.

How much profit or loss will she expect to make in a week?

(2 marks)

Examiner
use only
(Q3)

Checking (2 marks)

Examiner
use only
(Checking)

Total marks

Examiner
use only
(Total)

END OF TASK C

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OXFORD CAMBRIDGE AND RSA EXAMINATIONS

LEVEL 2 FUNCTIONAL SKILLS MATHEMATICS

PRACTICE PAPER 6

Mark Scheme

The maximum mark is 60

OCR Level 2 Functional Skills Maths Referencing for Coverage and Range

Our ref	Coverage and Range
N1	understand and use positive and negative numbers of any size in practical contexts
N2	carry out calculations with numbers of any size in practical contexts, to a given number of decimal places
N3	understand, use and calculate ratio and proportion, including problems involving scale
N4	understand and use equivalences between fractions, decimals and percentages
A1	understand and use simple formulae and equations involving one- or two-step operations
G1	recognise and use 2D representations of 3D objects
G2	find area, perimeter and volume of common shapes
G3	use, convert and calculate using metric and, where appropriate, imperial measures
S1	collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate
S2	use and interpret statistical measures, tables and diagrams, for discrete and continuous data, using information and communication technology (ICT) where appropriate
S3	use statistical methods to investigate situations
S4	use probability to assess the likelihood of an outcome

N – Number
 A – Algebra
 G – Geometry
 S - Statistics

Representing	Our Ref
Understand routine and non-routine problems in familiar and unfamiliar contexts and situations.	R1
Identify the situation or problems and identify the mathematical methods needed to solve them.	R2
Choose from a range of mathematics to find solutions.	R3
Analysing	
Apply a range of mathematics to find solutions.	A1
Use appropriate checking procedures and evaluate their effectiveness at each stage.	A2
Interpreting	
Interpret and communicate solutions to multistage practical problems in familiar and unfamiliar contexts and situations.	I1
Draw conclusions and provide mathematical justifications	I2

FS Maths L2 December 2012 Marking Guidance

Task 1 – Trains and Planes

Process	Max.	Award ... on evidence of ...	R	A	1																												
Part (a)																																	
i) Selecting cheapest flight [A]	1	£40			I1																												
ii) Finding the cheapest airport on average. [B]	4	<p>3: 2 for first correct mean, median or MMM 1 for second (matching)</p> <table style="margin-left: 40px;"> <tr> <td>Airport</td> <td>Mean</td> <td>Median</td> <td>MMM[▲]</td> </tr> <tr> <td><u>Liverpool</u></td> <td>£61.86</td> <td>£57</td> <td>£68.50</td> </tr> <tr> <td><u>Manchester</u></td> <td>£77.75</td> <td>£75</td> <td>£80.50</td> </tr> <tr> <td><u>Heathrow</u></td> <td>£100</td> <td>£98.50</td> <td>£100</td> </tr> </table> <p style="margin-left: 120px;">▲ Mean of Max. and Min.</p> <p style="margin-left: 100px;">_____ and _____</p> <p>1: Specific indication of candidates' cheapest based on their evidence (at least two averages).</p>	Airport	Mean	Median	MMM [▲]	<u>Liverpool</u>	£61.86	£57	£68.50	<u>Manchester</u>	£77.75	£75	£80.50	<u>Heathrow</u>	£100	£98.50	£100	R1 R3	A1	I1												
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<u>Heathrow</u>	£100	£98.50	£100																														
Part (b)																																	
Selecting best route for Mel using given data [C]	4	<p><i>(Maximum of 3 for numerical evidence, then 1 for using it)</i></p> <p>Cost</p> <p>1: each correct cell (may be implied)</p> <table style="margin-left: 40px;"> <tr> <td>Airport</td> <td>Flight (£)</td> <td>Rail (£)</td> <td>Total (£)</td> </tr> <tr> <td><u>Liverpool</u></td> <td>61.86/57/68.50</td> <td>43.30</td> <td>£100 -112</td> </tr> <tr> <td><u>Manchester</u></td> <td>77.75 /75 /110.50</td> <td>37.50</td> <td>£112 – 148</td> </tr> <tr> <td><u>Heathrow</u></td> <td>100 /98.50/100</td> <td>69.00</td> <td>£168 - 169</td> </tr> </table> <p>Rail journey and possible flight time</p> <p>½ : each correct cell (round up at final count for part (b))</p> <table style="margin-left: 40px;"> <tr> <td>Airport</td> <td>time (hours)</td> <td>frequency</td> <td>air/road distance</td> </tr> <tr> <td><u>Liverpool</u></td> <td>2 ½</td> <td>every hour</td> <td>630 170</td> </tr> <tr> <td><u>Manchester</u></td> <td>2</td> <td>every hour</td> <td>605 140</td> </tr> </table>	Airport	Flight (£)	Rail (£)	Total (£)	<u>Liverpool</u>	61.86/57/68.50	43.30	£100 -112	<u>Manchester</u>	77.75 /75 /110.50	37.50	£112 – 148	<u>Heathrow</u>	100 /98.50/100	69.00	£168 - 169	Airport	time (hours)	frequency	air/road distance	<u>Liverpool</u>	2 ½	every hour	630 170	<u>Manchester</u>	2	every hour	605 140	R1	A1 A1	I2
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<u>Liverpool</u>	2 ½	every hour	630 170																														
<u>Manchester</u>	2	every hour	605 140																														

Process	Max.	Award ... on evidence of ...	R	A	1
		<p><u>Heathrow</u> 3 twice an hour 320 260</p> <p>For rail journey and flight times etc. award 1 for at least one correct: "Nearest/ quickest/most often/least stops" etc. without numerical support.</p> <p>Other plausible reasons based in data given award as rail journey time etc.</p> <p>_____ and _____</p> <p>1: Decision based on candidates' own figures for the above. Must be supported by quantitative reason and ideally but not necessarily compared with other two airports, must have numerical data for relevant airport (but see above for journey times etc. e.g. 1 +1 for "Manchester is best as has most frequent trains" or equivalent if correct).</p> <p>_____ or _____</p> <p>SC1: Statement citing answer to part (a) but not giving any numerical evidence.</p>			
Part (c)					
<p>(i) Calculating carbon footprint per person (per km) for flight (<i>F</i>). [D]</p>	<p>5</p>	<p>4: 0.065 or 1: .. x 2.5 and 1: ... x 3.5 1: ÷ 134</p> <p>2 for answers of (5278 to 5279) or (5478 to 5479) or (3083 to 3084). le total footprint for their chosen flight</p> <p>1: statement of assumption that plane is full (or otherwise)</p>	<p>R1</p>	<p>A1 A1</p>	<p>I1 I2</p>

Process	Max.	Award ... on evidence of ...	R	A	1
(ii) Calculating the total carbon footprint based on choice of route. [E]	4	<p>1 For each correct [bracketed expression], or 2 For each <correct result>. or 4 For {correct answer} seen</p> <p>follow through on “F” .</p> <p><u>Manchester</u> [130 x 60] + [606 x F] or <7800 or 7.8> + <606 x F> = {47.19}</p> <p>or <u>Liverpool</u> [139 x 60] + [629 x F] or <8340 or 8.3> + <629 x F> = {49.19}</p> <p>or <u>Heathrow</u> [243 x 60] + [354 x F] or <14580 or 14.6> + <354 x F> = {37.6}</p> <p>SC1: If zero scored above allow 1 for the addition of the two components of the “footprint”.</p> <p><i>Some partial credit for aero footprint may be found in part(i)</i></p>	R2 R3	A1	I1
Checking [F]	2	<p>2: any comment indicating consideration of order (eg distances) or checking by using two different approaches 1: no evidence of careless errors or inaccuracy (based on at least 3 explicit, relevant calculations or equivalent).</p>		A2 A2	
			6 R	8 A	6 I

Task 2 – Rainbow Fish

Process	Award	on evidence of ...	Specification Criteria
Part (a) mark in spirit if alternative methods			
(i) Calculating volume of aquarium (V) [A]	2	2 : figs 406 (unit counts in (ii)) _____ or _____ 1 : 58 x 100 x 70 seen SC1 : 70 × 60 × 100 = 420000	R2
(ii) Calculating mass of water in the aquarium M kg [B]	1	1: “V” kg (must show correct units) = 406 kg or 406000g Allow follow through if this fits <i>stated</i> units in (i) or by doubling M (C1) and stating less than 1000 (D1)	R1
(iii) Calculating half a ton in kg (Q) [C]	1	1016 ÷ 2 1: = 508 (kg)	I2
Comparing “Q” and “M” [D]	1	1: Statement consistent (with “M” and “Q”) e.g. Daljit is wrong with figures quoted	
Part (b)			
Calculating area of water surface (S) [E]	1	70 x 100 1: =7000 (cm ²)	A1
Comparing the two fish stocking rules (total lengths) Volume rule (LV):	2	1: “V” ÷ 1.8 1: LV = “225.5.....” (cm) 2 www Accept 225 or 226 Full follow through from “V”	A1 I1
Surface rule (LS):	2	1: “S” ÷ 12	A1 I1

Process	Award	on evidence of ...	Specification Criteria
Comparing the above figures <p style="text-align: center;">[F]</p>	1	<p>1: $LS = "583.3...."$ (cm) 2 www Accept 583 or 584 Full follow through from "S"</p> <p>1: Correct comparison given stated "LV" and "LS"</p>	I2
Part (c)(i)			
Finding maximum stock levels of fish. Selecting average fish length (L) <p style="text-align: center;">[G]</p>	3	<p>3: Clear intention to calculate or find median and figure of 8 selected . _____ or _____</p> <p>1: some recognition that "66" is a rogue value</p> <p>2: mean calculated with 66 excluded $(\frac{140}{17}) = 8.24$</p> <p>_____ or _____</p> <p>1: some recognition that "66" is a rogue value</p> <p>2: mean calculated with 66 included $(\frac{206}{18}) = 11.4$</p> <p>_____ or _____</p> <p>1: A clear but incorrect attempt at mean/median with or without 66 _____ or _____</p> <p>1: Obvious choice, but no justification given, of 8 to 11 or 66 (the largest) _____ or _____</p> <p>SC2: 66 chosen with a logical reason</p>	R3 R3 A1

Process	Award	on evidence of ...	Specification Criteria
Calculating number of fish from Callum's formula (N) [H]	2	Allow full follow (7000) through for "surface area" calculated as 5sides (27400) or 5 sides + surface area of water (34400) (1 for substitution + 1 for correct answer (decimal or integer up or down) 2: =21.88 or 21 or 22 using median = 8 _____ or _____ 2 : = 21.24 or 21 or 22 using mean = 8.24 _____ or _____ 2: = 15.35 or 15 or 16 using mean = 11.4	A1 A1
Part (c)(ii)			
Finding the number of fish from the two previously given rules (giving the total fish lengths) [I]	1	As a minimum "their answer to (c) for the minimum total length" divided "mean length" seen	R2 I1
Comparing the two fish numbers with that derived from Callum's formula [J]	1	Correct statement from candidate's calculations or stated values above.	I2
Checking calculations or considering feasibility/viability of answers. [K]	2	2: Clear evidence of a checking procedure being carried out at any appropriate point in the task. 1: Clear recognition and relevant statement at any appropriate point that a particular answer to a calculation is appropriate/expected or inappropriate/not expected or	A2

Process	Award	on evidence of ...	Specification Criteria		
		no idiosyncratic part answers in the course of the task. 0: No evidence of checking or consideration of reasonableness of answers – including bland statements to the effect that calculations were checked without any relevant evidence.			
TOTAL	20		7	7	6

Task 3 – Baked Potatoes

Process	Award	On evidence of
Section (a)		
Estimating number of possible sales of baked potatoes (<i>N</i>) <p style="text-align: center;">[A]</p>	3	<p>3: 200 or 220 customers www _____ or _____</p> <p>1: Fraction $\frac{1}{4}$ or $\frac{11}{40}$ or equivalent (e.g. 0.25, 0.275) seen</p> <p>1: Attempt to calculate $\frac{1}{4}$ or $\frac{11}{40}$ of 800 _____ or if zero scored _____</p> <p>1: partially successful attempted to use ratio as evidenced by, for example, $800 \div 51$ or $800 \div 40$ seen in working</p>
Section (b)		
Estimating weekly cost of potatoes <p style="text-align: center;">[B]</p>	3	<p>Allow full follow through from “<i>N</i>”</p> <p>3: $5 \times \text{£}45 = (\text{£})225$ _____ or _____</p> <p>1: figs $56 \div 250$ seen or implied to give number of sacks per day.</p> <p>1: “their sacks per day” – from above $\times 45$ (or independent) _____ or _____</p> <p>2: Statement to effect that she needs about 1 sack a day supported by some working, but only 1 if merely stated or $7 \times \text{£}45 = 315$ _____ or _____</p>

Process	Award	On evidence of												
		<p>Working from a whole week as the unit:- Explicitly seen or implied from working.</p> <p>2: $\frac{[N \times 250 \times 5]}{[1000]} \div [56]$ (1 for each [expression] maximum of 2. effectively “N” x 0.0223 ...)</p> <p>1: Answer to above (possibly implied) x £45 and rounded up</p> <p>_____ or if zero scored _____</p> <p>1: Evidence of calculation to find number of potatoes in a sack (56 x 4) or realisation that there are 4 potatoes in a kilo of potatoes or total number people (or potatoes sold) taken as “N” x 5 seen.</p>												
Section (c)														
<p>Estimating effective weekly cost of oven (W)</p> <p>[C]</p>	2	<p>2: (£) 10.20 to (£) 11.20 or £10 _____ or _____</p> <p>1: 535 ÷ 48/52 seen or implied or 535 ÷ “stated number of weeks in a year”</p>												
Section (d)		<p><i>The total number of potatoes sold in a week may have to be inferred from working above. Boxes and forks may be costed as per unit allow this.</i></p>												
<p>Calculating Amy’s weekly costs</p> <p>[D]</p>	8	<p>(Assuming “N” x 5 potatoes/customers a week) Allow full follow through* – but must be consistent – mark to candidate’s advantage.* this includes using daily rather than weekly prices if consistently used), These figures are for 1000 sales (see also table at end)</p> <p>1 for each:</p> <table data-bbox="1003 1149 1769 1348"> <tr> <td>Boxes</td> <td>£60.80</td> </tr> <tr> <td>Forks</td> <td>£8</td> </tr> <tr> <td>Filling</td> <td>£200</td> </tr> <tr> <td>Potatoes</td> <td>£220 to £250 – can ft from (b)</td> </tr> <tr> <td>Oven</td> <td>£10 - £11</td> </tr> <tr> <td>Heating etc.</td> <td>£20</td> </tr> </table> <p>1: For recognition that 6 components are necessary (but calculations not necessary correct)</p>	Boxes	£60.80	Forks	£8	Filling	£200	Potatoes	£220 to £250 – can ft from (b)	Oven	£10 - £11	Heating etc.	£20
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Heating etc.	£20													

Process	Award	On evidence of
		<p>1: “By-eye” correct total £450 - £550 or follow through on candidates’ figures but must be at least three items of the above six.</p>
Section (e)		
Calculating Amy’s profit or loss <p style="text-align: center;">[E]</p>	2	<p>1: “weekly sales ($N \times 5$) \times £2.50</p> <p>1: Comparison of “total weekly costs” with “weekly sales revenue” but loss must be stated as such or given as a negative number.</p>
Checking <p style="text-align: center;">[F]</p>	2	<p>2: Clear evidence of a formal checking procedure being carried out at least once (e.g. by reverse calculation or repeating the calculation providing this is clearly a genuine check as opposed to a mere copying exercise).</p> <p>1: Clear recognition and relevant statement at any appropriate point that a particular answer to a calculation is appropriate/expected or inappropriate/not expected</p> <p style="text-align: center;">_____ or _____</p> <p>Two or more calculations relevant to the task correctly performed, together with the absence of idiosyncratic part answers in the course of the task – these will usually be such that they are clearly at least two orders of magnitude different from the real-life quantity or measure.</p> <p>0: No evidence of checking or consideration of reasonableness of answers – including bland statements to the effect that calculations were checked without any relevant evidence.</p>

N potatoes per day	per week	bags per week	Cost (not rounded)	(£) Cost rounded down	(£) Cost rounded up	Forks	Boxes	Fillings	heating	lo cooker	hi cooker	lo costs	hi costs	lo profit	hi profit
250	1250	5.58	251.12	225.00	270.00	16.00	76.00	250.00	20.00	10.29	11.15	581.29	643.15	2,481.85	2,543.71
240	1200	5.36	241.07	225.00	270.00	16.00	76.00	240.00	20.00	10.29	11.15	571.29	633.15	2,366.85	2,428.71
230	1150	5.13	231.03	225.00	270.00	16.00	76.00	230.00	20.00	10.29	11.15	561.29	623.15	2,251.85	2,313.71
220	1100	4.91	220.98	180.00	225.00	16.00	68.40	220.00	20.00	10.29	11.15	498.69	560.55	2,189.45	2,251.31
210	1050	4.69	210.94	180.00	225.00	16.00	68.40	210.00	20.00	10.29	11.15	488.69	550.55	2,074.45	2,136.31
200	1000	4.46	200.89	180.00	225.00	8.00	60.80	200.00	20.00	10.29	11.15	471.09	524.95	1,975.05	2,028.91
190	950	4.24	190.85	180.00	225.00	8.00	60.80	190.00	20.00	10.29	11.15	461.09	514.95	1,860.05	1,913.91
180	900	4.02	180.80	180.00	225.00	8.00	60.80	180.00	20.00	10.29	11.15	451.09	504.95	1,745.05	1,798.91
170	850	3.79	170.76	135.00	180.00	8.00	53.20	170.00	20.00	10.29	11.15	388.49	442.35	1,682.65	1,736.51
160	800	3.57	160.71	135.00	180.00	8.00	53.20	160.00	20.00	10.29	11.15	378.49	432.35	1,567.65	1,621.51
150	750	3.35	150.67	135.00	180.00	8.00	45.60	150.00	20.00	10.29	11.15	360.89	414.75	1,460.25	1,514.11
140	700	3.13	140.63	135.00	180.00	8.00	45.60	140.00	20.00	10.29	11.15	350.89	404.75	1,345.25	1,399.11
130	650	2.90	130.58	90.00	135.00	8.00	45.60	130.00	20.00	10.29	11.15	295.89	349.75	1,275.25	1,329.11
120	600	2.68	120.54	90.00	135.00	8.00	38.00	120.00	20.00	10.29	11.15	278.29	332.15	1,167.85	1,221.71
110	550	2.46	110.49	90.00	135.00	8.00	38.00	110.00	20.00	10.29	11.15	268.29	322.15	1,052.85	1,106.71
100	500	2.23	100.45	90.00	135.00	8.00	30.40	100.00	20.00	10.29	11.15	250.69	304.55	945.45	999.31