

**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
<b>TASK A</b>		
	/	<b>/20</b>
	/	
	/	
	/	
	/	
<b>TASK B</b>		
	/	<b>/20</b>
	/	
	/	
	/	
	/	
<b>TASK C</b>		
	/	<b>/20</b>
	/	
	/	
	/	
	/	
<b>Total</b>	<b>/60</b>	

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

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## RESOURCE DOCUMENTS

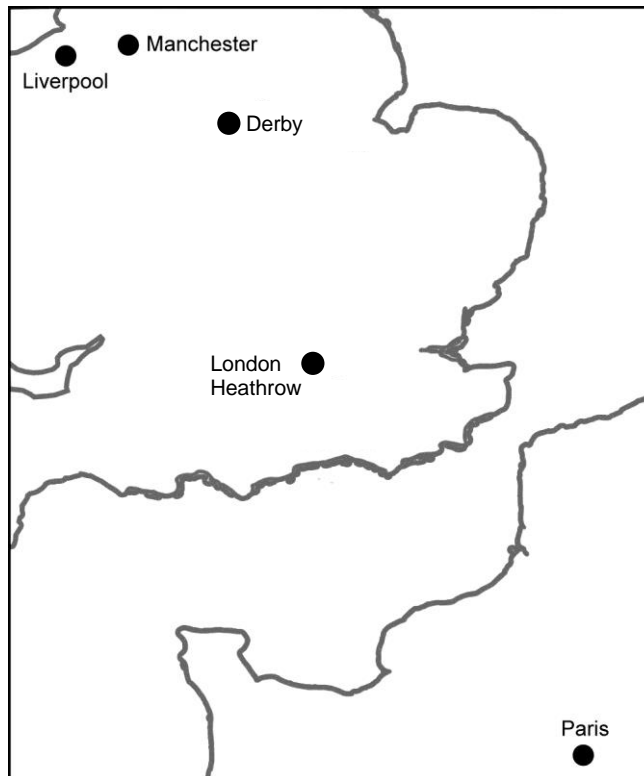
The Resource Documents on pages 5, 7, 9 and 11 contain information to help you to answer the tasks in this booklet.

- 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 ....**

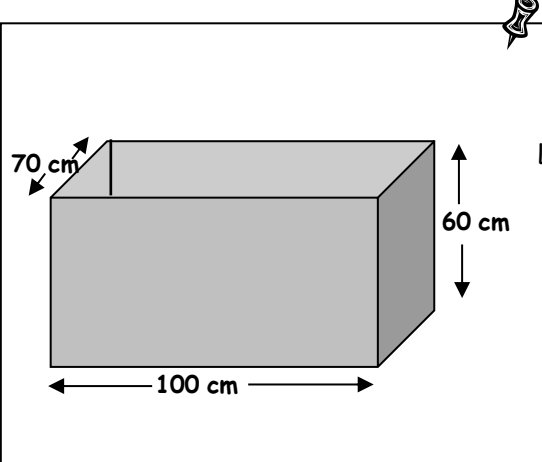


Manchester	606
Liverpool	629
London Heathrow	354

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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 <sup>3</sup> 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?

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**(1 mark)**

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

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**(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.

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**(4 marks)**

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

- (c) (i)** How much CO<sub>2</sub> per kilometre does an Airbus A319 produce **per person**?  
Write down any assumptions you make.

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**(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.

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**(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.

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**(2 marks)**

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

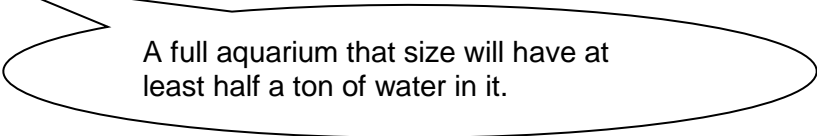
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**(1 mark)**

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.

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**(2 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?

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**(2 marks)**

Examiner  
use only  
(Q2)

**Checking (2 marks)**

Examiner  
use only  
(Checking)

**Total marks**

Examiner  
use only  
(Total)

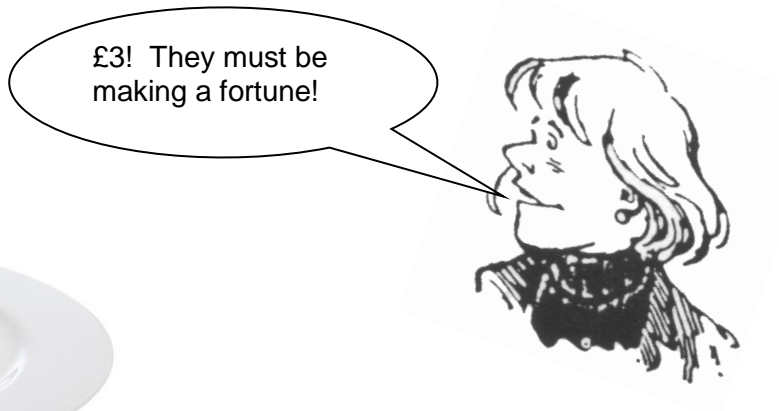
**END OF TASK B**

**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.

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**(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.

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(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

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(2 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?

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**(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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