

OXFORD CAMBRIDGE AND RSA EXAMINATIONS LEVEL 1 FUNCTIONAL SKILLS MATHEMATICS

09865

TASK AND ANSWER BOOKLET PRACTICE PAPER 4

TIME: 1 HOUR 30 MINUTES

INSTRUCTIONS																		
Fill in all the boxes below. Make substitution Exercises.	ure yo	ur p	erso	nal d	detai	ls ar	еє	ente	red	cor	rect	ly. l	Jse	BL	ОСК			
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At the beginning of this booklet yo)			-		IN	_	TAS	K A			
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THREE TASKS										-						/		
For each task, make sure that you	ı:									-						/	ľ	20
• read the questions carefully be		tarti	ng							-			-	TAS	K C	/		Ť
• write your answers in this book	let									-						/		_
• clearly show how your working	leads	to y	our a	ansv	vers											/		
2 marks are available in each ta	sk wh	en '	VOII 9	shov	w vo	u ha	ave	١		-						/		
checked your work.	J		,		. , ,					_						/	ľ	20
When you have finished, hand this	s hook	det :	and a	all the	Δ							То	tal		/6	0		<u>. </u>
Resource Documents to the super			IU C		•													_

Ofqual Qualification Reference Number: 500/8910/9

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.

TASK A – ORCHARD

RESOURCE DOCUMENT 1

Table of apple varieties with information and prices

Apple Variety	Picking time	Price per tree in £
Beauty of Bath	Aug	11
Chiver's Delight	Oct	20
Cox's Orange Pippin	Oct	11
Discovery	Aug	12
Fiesta	Oct	11
George Cave	Aug	12
Jester	Oct	12
Jupiter	Oct	11
Katy	Sep	11
Lord Lambourne	Oct	11
Michaelmas Red	Oct	15
Rosemary Russet	Oct	15
Spartan	Sep	11
Sunset	Oct	11
Superb	Nov	11
Winston	Nov	11
Winter Gem	Nov	20

Prices of extra planting items

Item	Price in £ of each for buying 1 to 4	Price in £ of each for buying 5 to 49
Tree guard	0.90	0.82
Tree stake	2.10	1.90
Mulch mats	2.50	2.30

TASK B - ON YOUR BIKE

RESOURCE DOCUMENT 1

This is part of John's training plan.

	Number of miles each week
Week 1	18
Week 2	23
Week 3	29
Week 4	35
Week 5	39
Week 6	42
Week 7	48
Week 8	55

These are the distances John cycled on the first four days he trained in week 9.

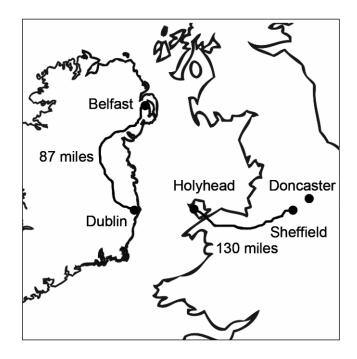
Monday	Tuesday	Wednesday	Thursday	Friday
13 miles	10 miles	11 miles	15 miles	

Here are the times for John & Ryan in week 10

	John	Ryan
Monday	48 minutes	1 hour 6 minutes
Tuesday	1 hour 15 minutes	1 hour 14 minutes
Wednesday	1 hour 8 minutes	1 hour 13 minutes
Thursday	1 hour 23 minutes	1 hour 3 minutes
Friday	1 hour 11 minutes	49 minutes
Saturday	1 hour 9 minutes	1 hour 8 minutes

TASK C - HALF TERM TRIP

RESOURCE DOCUMENT 1



Speedy ferries

Holyhead to Dublin Crossing Time: 2 hours

Ferries sail every day at 5am, 1pm and 9pm

Return fares

Adult	£46
Child	£28
Car	£126

Holyhead to Belfast Crossing Time: 8 hours

Ferries sail every day at 3am, 9am and 8pm

Return fares

Adult	£56
Child	£38
Car	£146

TASK C - HALF TERM TRIP

Flyjet flights

Doncaster to Belfast (City)

	Fri 22 Oct	Sat 23 Oct	Sun 24 Oct	Mon 25 Oct
9am	£27.99	£29.99	£19.99	£27.99
2pm	£43.99	£37.99	£15.99	£33.99

Belfast (City) to Doncaster

	Fri 29 Oct	Sat 30 Oct	Sun 31 Oct	Mon 1 Nov
11am	£36.99	£28.99	£25.99	£47.99
5pm	£46.99	£38.99	£19.99	£39.99

All prices are the same for an adult or a child.

Wheels-2-go Car Hire

Belfast office

Rent a Citroen diesel car ONLY £132 a week

Fuel costs extra

TASK AND ANSWER PAGES

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

TASK A - ORCHARD

You will need Task A Resource Document 1



Jo wants to plant an orchard of apple trees and pear trees in her field. Jo has a price list for apple trees.

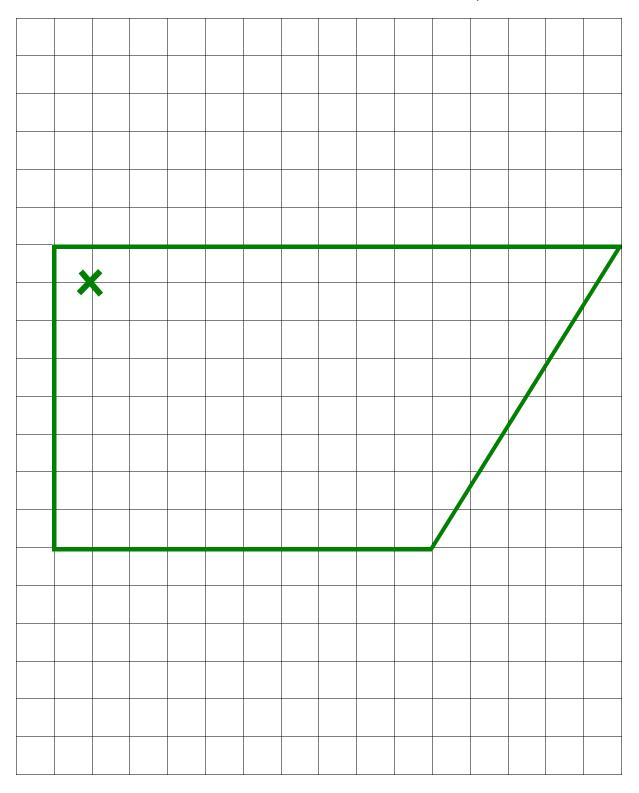
Q1	(a)	(i)	What is the most common price of an apple tree?	
				(1 mark)
		(ii)	When are most of the varieties of apple ready to pick?	
				(1 mark)

JO L	ouys 25 trees. She wants to plant 2 pear trees for every 3 apple trees.	
(b)	How many apple trees and how many pear trees should she buy?	
		(3 marks
	decides to start by buying one of each type of apple tree on her list,	
	ept for the two most expensive trees. hinks that the apple trees will cost her about £150.	
JU 1	minks that the apple trees will cost her about £130.	
(c)	Explain whether Jo is right.	
		(3 marks
		(3 iliai kā
۸ ۱۱	of lo's 25 trace will each pood a trace stake and a trace guard	
All	of Jo's 25 trees will each need a tree stake and a tree guard.	
(d)	Work out how much these will cost altogether.	
(α)	Work out now much those will cost altogether.	
		(4 marks

Jo has a field where she wants to plant the trees. The field is drawn to scale, on the 1cm square grid below.

Jo's field

Scale 1 cm represents 1 m



Turn over © OCR 2018

Jo thinks that she can plant 25 trees in this field.

Trees must be planted: - at least 2 m apart in all directions - at least 1 m from the edge of the field.

(e)	Mark on the scale diagram where Jo should plant trees so that she can fit in as many as possible.	
	One tree is marked for you 🗶 .	
	Can Jo plant all 25 trees in her field?	
		Examiner use only
	(6 marks)	(Q1)
		Examiner
	Checking (2 marks)	use only (Checking)
	Checking (2 marks)	(Griodiung)
		Examiner
	Total marks	use only (Total)

END OF TASK A

TASK B - ON YOUR BIKE

You will need Task B Resource Document 1

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(3 marks)

In week 9, John decides to ride **different** distances each day for five days of the week.

He wants to cycle 12 miles, on average, each day.

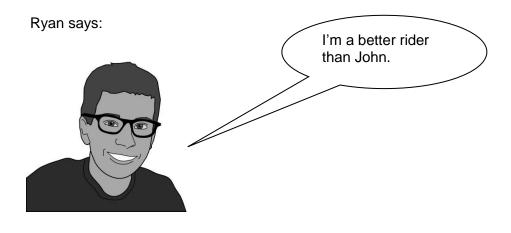
John and Ryan both train in week 10 and ride on six days.

On any day they both ride the same distance as each other.

(d)	(i)	Show that John rides for 75 minutes on Tuesday.	
			(1 marl
	John	says:	
		The average time for my rides in week 10 is 67 minutes)
	(ii)	Is John right?	

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(5 marks)



(iii)	Is Ryan correct? Use calculations to justify your answer and give a reason.	
		Examiner
		use only (Q2)
	(4 marks)	
		Examiner use only
	Checking (2 marks)	(Checking)
	Total marks	Examiner use only (Total)
		(1233.1)

END OF TASK B

TASK C - HALF TERM TRIP

You will need Task C Resource Document 1

Sandy, Tony and their 2 children live in Sheffield. They want to visit friends in Belfast.

Sandy chooses the ferry that takes the shortest time.

Q3	(a)	Which ferry does Sandy choose and how long	g does this crossing take?	
				(2 marks)
		Sandy says	It takes about 4 hours to drive to Holyhead from Sheffield. Let's have lunch on the ferry.	
	(b)	What time should the family leave Sheffield?		
		Give reasons for your answer.		
				(3 marks)

			(3 marks)
y says	My car does about 11 miles on each litre of diesel. Diesel costs around £1.25 per litre.		We will have to drive to Holyhea and then drive from Dublin to Belfast.
d) What is the	e total cost of the fuel to get to	Belfast and back?	



Should the family go by ferry or fly?	
Show how you decide.	
	Examiner
	use only (Q3)
(5 marks)	(Q3)
	Examiner use only
Checking (2 marks)	(Checking)
	Examiner
Total marks	use only
	(Total)

END OF TASK C

(e)

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OXFORD CAMBRIDGE AND RSA EXAMINATIONS

LEVEL 1 FUNCTIONAL SKILLS MATHEMATICS

PRACTICE PAPER 4

Mark Scheme

The maximum mark is 60

OCR Level 1 Functional Skills Maths Mark Scheme Referencing

Our ref	Coverage and Range
N1	Understand and use whole numbers and understand negative numbers in practical contexts
N2	Add, subtract, multiply and divide whole numbers using a range of strategies
N3	Understand and use equivalences between common fractions, decimals and percentages
N4	Add and subtract decimals up to two decimal places
N5	Solve simple problems involving ratio, where one number is a multiple of the other
N6	Use simple formulae expressed in words for one-or-two-step operations
G1	Solve problems requiring calculation, with common measures, including money, time, length, weight, capacity and temperature
G2	Convert units of measure in the same system
G3	Work out areas and perimeters in practical situations
G4	Construct geometric diagrams, models and shapes
S1	Extract and interpret information from tables, diagrams, charts and graphs
S2	Collect and record discrete data and organise and represent information in different ways
S3	Find mean and range
S4	Use data to assess the likelihood of an outcome

Process Skills/Skill Standards

R = Representing
A = Analysing
I = Interpreting

Representing	Our Ref
Understand practical problems in	R1
familiar and unfamiliar contexts and	
situations, some of which are non-	
routine.	
Identify and obtain necessary	R2
information to tackle the problem	
Select mathematics in an organised	R3
way to find solutions	
Analysing	
Apply mathematics in an organised	A1
way to find solutions to	
straightforward practical problems	
for different purposes.	
Use appropriate checking	A2
procedures at each stage.	
Interpreting	
Interpret and communicate solutions	l1
to practical problems, drawing	
simple conclusions and giving	
explanations.	
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FS Maths L1 September 2011 Marking Guidance

Task 1 – Orchard

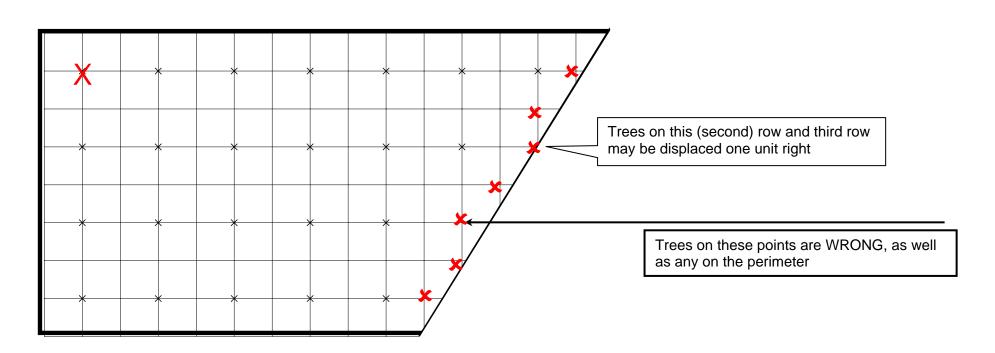
Part	Process Award On evidence of		Notes	S	Ski tanda A			
a(i)	Read table and apply rule for mode	1		(£) 11	Do not accept mean (£12.71)	R2		
a(ii)	Interpret table	1		October				I1
b	Use proportions	3	3 2 1	15 apples and 10 pears or 15 apples or 10 pears or 5 or division by 5 or grouping into 5s seen		R3	A 1	l1
С	Add prices and compare with £150	3	1	or Attempt to add prices without £20 trees and 1 from Jo spends more than (£)150 or (£)150 is not enough or (No) Jo will have to spend (£)176 or Jo spends (£)26 extra	0 for £216 (includes all prices) Allow ft from <i>their</i> total for comments	R1	A 1	I1
d	guards and stakes 2		2	(£)68 or (£)75 or 40.8(0) or 45 or 20.5(0) and 47.5(0) or (£)0.82 or 1.9(0) or 20.5(0) or 47.5(0) or 22.5(0) or 28.5(0) or 12.3(0) seen and Correct money conventions used in <i>their</i> answer	Allow equivalent figs in pence and mark intention 40.8 and 45 from 15 trees ft transcription error for 2 Allow equivalent figures in pence from 25 or 15 items at low and high prices Includes individual prices	R2 R3	A 1	I1

Part	Process	Award	On evidence of	Notes	1	Skil Standa	
е	Mark tree planting pattern on scale diagram	6	 Distance from edge 2 20 trees and no tree < 1cm from edge of field or 1 20 trees with trees < 1 cm from edge of field or Fewer than 20 trees and none < 1 cm from edge of field Distance apart 2 20 trees and no tree < 2cm from neighbour or 1 20 trees with trees < 2cm from neighbour or Fewer than 20 trees and none < 2 cm from neighbour Number of trees 1 23 correctly spaced trees, including given tree or Correct count of their number of trees and one from Jo can only plant their 23 (or their 23 – 1) trees Jo cannot plant all her (25) trees Their "No" with evidence on grid 	Do not penalise same tree twice for first 4 marks Area Method 1 for Area = 90 to 110 (A) 1 for Area of tree = 4m² (T) 1 for integer answer to A ÷T Must include given tree If a number is quoted then must follow from their diagram	R1 R2	A1	311
	Checking	2	 A clear check of a calculation or Statement that an answer is reasonable, or 3 correct calculations throughout task or Fewer than 3 correct calculations or answers and no checks 			2A2	2
	TOTAL	20		Totals	7	6	7

Expected solution and evidence

3d

			Individual	Paired	Individual	Paired		
	Individual prices	Guard and Stake	15		15		2	5
Tree guard low	£0.82	£2.72	£12.30	£40.80	£20.50	£68.00		
Stake low	£1.90		£28.50		£47.50			
Tree guard high	£0.90	£3.00	£13.50	£45.00	£22.50	£75.00		
Stake high	+ / 111		£31.50		£52.50			



Task 2 - On Your Bike

Part	Process	Award	On evidence of	Notes		l Stand	ards I
а	Find how far John should be riding each day	2	 7 (miles) or 5 (miles) or 35 ÷ 5 attempted 	Penalise first use of 7 days as MR (instead of 5) then award full marks (ft) for parts a and b c .	R2	A 1	
b	Decide if John has reached his target for week 7	3	 45 or 9.6 (miles) seen or 9 x 5 or 48 ÷ 5 attempted	If 7 days then 7 x 9 = 63 63 - 48 = 15 miles extra Statement correct for <i>their</i> figures	R1	A 1	I1
С	Find the number of miles John needs to ride on Friday	3	 11 or 12 miles (on Friday) 60 and 49 seen or +1, -2, -1, +3 → +1 oe seen Attempt (13+10+11+15) or attempt (+1, -2, -1, +3 → +1 oe) or attempt (their 60 - their 49) or 5 x 12 or 60 or 49 seen 	-1, +2, +1, -3 → -1 (Order and attempt middle 2) If MR 7 days previously, then expect 84 here	R1	A 1	l1
d(i)	Show that John rides for 75 minutes on Tuesday	1	1 60 + 15 (= 75) seen	·			I1
d(ii)	Find John's average time	5	 4 (mean =) 69 or (median =) 70 or 3 Their 414 minutes ÷ 6 or 69 or 71 (from rank order) or 2 Attempt to add times in minutes or 414 or Attempt to order times or 68, 69, 71 and 83 or 1 Attempt to add times or 2 of 68, 69, 71 or 83 And 1 "John is not right" oe based on average. 	69 or 71 attempt to find centre Order 48, 68, 69, 71, (75, 83) 5h 114m ÷ 6 ≠ 69 scores 1 mark. Must follow an average and be correct for <i>their</i> mean or median	R2 R3	A1	l1 l1

Part	Process	Process Award On evidence of	Notes		Skill Standards R A I			
d(iii)	Proves who is the better rider	4	Ryan's average (mean =) 65.5 or 66 or (median =) 67 or time difference = 21 minutes or	Accept in hours and min				
			 393 or their total ÷ 6 or 49, 63, 66, 68, (73, 74) or Ryan total time 6h 33m or Attempt to compare times on 6 days. And	Condone 6 33 if meaning clear	R2			
			"Ryan is better" oe AND reason supported by their figures And	Follow from <i>their</i> answers Condone "On most days Ryan rides faster"	R3	A1	I1	
			Attempt to comment on consistency (Eg range of performance on individual days) or Consistent use of time units throughout	Eg On some days there was a big difference in times Ryan range = 25 John range 35				
	Checking	2	A clear check of a calculation or Statement that an answer is reasonable, or accreat calculations throughout took or			A2		
			3 correct calculations throughout task or 0 Fewer than 3 correct calculations or answers and no checks			A2		
	Total	20		Total	7	7	6	

Task 3 -Half Term Trip

Part	Process	Process Award On evidence of	Notes	Skill Standards			
а	Choose ferry	2	(Holyhead) to Dublin 2 hours	Isw or explanation that does not contradict answer	2R2	Α	1
b	Choose time to leave	3	Leaving time from Sheffield For 1pm sailing for 9am sailing 8am to 9am oe or 4am to 5am Correct time 4 to 5 hours before wron Reason for extra time such as, travel time in hand to avoid rushing etc	Morning only eg 0845 Must be wrong ferry. If time is 8-9 or 4-5am and ferry inconclusive, award mark.	R2		211
С	Cost of ferry	3	2 figs 274 or figs 334 or 148 or 2 x 46 + 2 x 28 or 188 or 2 x 56 + 2 x 38 46 or 28 or 126 or 56 or 38 or 146 soi	£27.4, 3340p or 2740 Reward complete method Do not penalise wrong money notation BUT, if answer in pence, must show p.	R3	A1	I1

Part	Process	Award	On evidence of	Notes		ards	
d	Cost of journey	5	Distance 2 434 or 440 [D] 1 217 or 220 [D] Fuel cost Cost in range £53.26 – £54 or £26.63 – £27 oe Their [D] ÷ 11 x 1.25 (or x 0.11(3636)) correct	440 from rounding 217 may be implied from later work eg 130 and 87 seen with a cost which is later added Correct money conventions for answer Correct cost implies distance mark www	R R2 R3	A 2A1	I I1
			 Attempt <i>their</i> number of litres x 1.25 oe Attempt ÷ 11 oe or x 1.25 	Must be their number of litres and not their distance Reward at any stage			

Part	Process	Award	On evidence of	Notes	Skil R	I Stand A	ards I
е	Choose flights	5	Cost of flights 1	[F] is their flight cost Addition must be correct Addition must be correct Eg A ferry cost seen and "flights cheaper" If no working Answer based on cost scores 0 Reward other answers appropriately (such as convenience)	R3	2A 1	211
	Checking	2	 A clear check of a calculation or Statement that an answer is reasonable, or 3 correct calculations that would lead to an acceptable answer throughout the task or Fewer than 3 correct calculations or answers and no checks 			2A2	
	TOTAL	20		Totals	7	7	6

Expected solution and evidence

- (a) Choose ferry to Dublin. This ferry takes 2 hours.
- (b) Take 1pm ferry. 4 hours before 1pm is 9am. Leave at least ½ hour earlier than this to allow for check-in or delays enroute.
- (c) $2 \times 46 + 2 \times 28 + 126 = £274$
- (d) $(130 + 87) \times 2 = 434 \text{ miles. } 434 / 11 = 39.45(4545...) = about 40 litres of diesel. Cost 40 x 1.25 = £50$
- (e) Cost using ferry + 274 + 50 = £324

Cheapest flights = $4 \times 15.99 + 4 \times 19.99 = £143.92$

Add cost car hire £132

Total cost when fly = 143.92 + 132 = £275.92