

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

LEVEL 2 FUNCTIONAL SKILLS MATHEMATICS

09866/RB

This assessment may be taken within these dates:

4 – 8 APRIL 2011

RESOURCE BOOKLET

This booklet contains information needed to answer the tasks for the OCR Functional Skills Mathematics assessment April 2011.

Task 1 – Making Lunch

Here is the menu from the sandwich shop.
Each sandwich is made from 2 slices of bread.

Meal Deal	
Any sandwich, crisps and drink only £2.99	
Sandwiches	Fat content Per sandwich
Tuna salad	13.5 g
Ham, cheese and pickle	18.9 g
Chicken salad	17.1 g
Egg mayo	17.5 g
Cheese and tomato	17.6 g
Ham and egg salad	16.5 g
Bacon	23.5 g
Crisps	Fat content Per packet
Ready salted	11.4 g
Cheese and onion	11.4 g
Salt and vinegar	11.4 g
Drinks	Fat content
Still water	none
Sparkling water	none

Guideline daily amounts for average adults

Each day	Women	Men
Calories	2000 kcal	2500 kcal
Fat	70 g	95 g
Saturates	20 g	30 g
Salt	6 g	6 g
Sugar	90 g	120 g

Omar finds this information from a supermarket website.

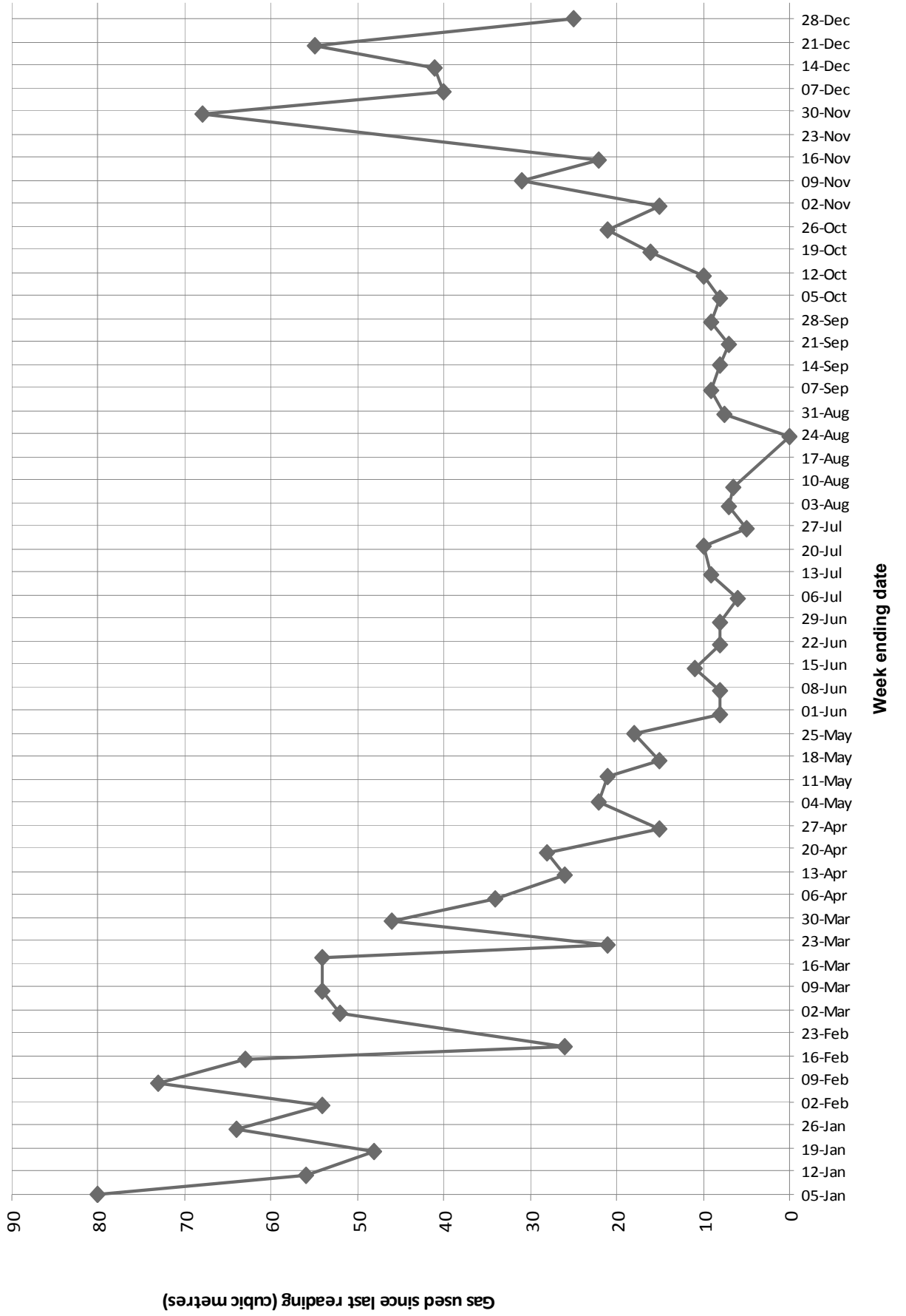
Nutritional information					
Item	Amount	Energy	Protein	Fat	Carbohydrate
Thick sliced white loaf	In one slice	105 kcal	3.6 g	0.7 g	21.0 g
Low fat cheese slices	In one slice	70 kcal	8.2 g	4.0 g	trace
Salad tomatoes	In one tomato	13 kcal	0.5 g	0.2 g	2.2 g
Salt and vinegar crisps	In one packet	135 kcal	1.4 g	8.3 g	13.0 g

Item	Weight	Cost
Thick sliced white loaf	800 g	£0.74
Low fat cheese slices	10 × 25 g	£1.95
Salad tomatoes	6 pack	£0.88
Salt and vinegar crisps	6 × 25 g	£0.87
Still water	500 ml	£0.43

An average loaf of bread contains 18 slices.

Task 2 – Using gas

Here is the graph showing Alex's weekly gas usage for 2009.



Here are the numbers of kilowatt hours (kWh) Alex used in each quarter of 2009.

Quarter	1	2	3	4
Gas used (kWh)	6326	1493	1301	6898

Note: a quarter of a year is 3 months.

Alex's gas charges

Price excluding VAT	
First 1143 kWh per quarter	Remaining kWh
3.500 p per kWh	2.549 p per kWh

Price including VAT (at 5%)	
First 1143 kWh per quarter	Remaining kWh
3.675 p per kWh	2.676 p per kWh

Fed up with your high winter fuel bills?

Choose our special tariff and spread your payments over the whole year.

Saver tariff

First 2680 kWh per year
Each remaining kWh

All prices include VAT

5.41485 p per kWh
2.62080 p per kWh

6% discount for online billing

Task 3 – Trampoline

Carla finds this information about trampolines.

Superior trampoline

Lifetime guarantee against rust

Diameter: 360 cm

Maximum weight 114 kg

£365 including delivery



Anchor kit £15

Needed with all trampolines

Delivered free
with any trampoline

Carla's local council gives her this information.

Safety surface guidelines for outdoor play equipment

- Safety surfaces must extend at least 180 cm around all sides of the base of equipment.
- Where bark is used, this should be at least 300 mm deep.
- It is important to have additional bark available to top up to the original level.

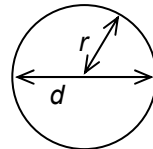
Carla finds these formulas in her diary.

Circumference of a circle

$$C = \pi d \text{ or } C = 2\pi r$$

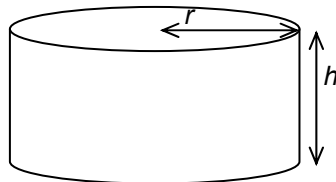
Area of a circle

$$A = \pi r^2$$



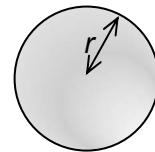
Volume of a cylinder

$$V = \pi r^2 h$$



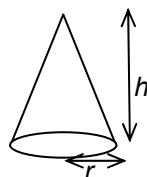
Volume of a sphere

$$V = \frac{4}{3} \pi r^3$$



Volume of a cone

$$V = \frac{1}{3} \pi r^2 h$$



Take $\pi = 3.1$ or use the value on your calculator

Carla found this information from a garden supplies company on the internet.

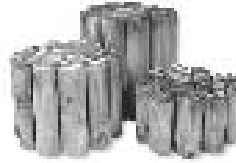
Log roll fence

For straight or curved edges

Available in 5 heights

Guaranteed for 12 years against rot

Free delivery over £39.99



Height	150 mm	230 mm	300 mm	375 mm	450 mm
Length	1.8 m	1.8 m	1.8 m	1.8 m	1.8 m
Price (inc VAT)	£5.99	£6.99	£8.99	£10.99	£12.99

Play Bark Safety Surface

Play bark certificated to BS EN 1177: 1998

Safety certificated, fire certificated

Safe depth – at least 300 mm

Price includes VAT and delivery to UK mainland



1 cubic metre bulk bag £139.00
2 cubic metre bulk bag £189.00

Task 3, page 6 Trampoline, baldari / shutterstock

Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee
Registered in England
Registered Office: 1 Hills Road, Cambridge, CB1 2EU
Registered Company Number: 3484466
OCR is an exempt Charity

L354/APR11