AQA

Functional Skills Certificate
FUNCTIONAL MATHEMATICS

Level 2

Data Book (Examination)

Insert

Instructions

- This copy of the Data Book is for use in the examination. It should not be given to students in advance.

Advice

- This book will not be collected in for marking. Ensure that all working that you wish to have marked is written in the space provided in the question/answer book.

4368

QAN 500/8702/2

IB/M/Jun16/E7

Data Sheet for Camping in France

Ferry

You can take your car on a ferry to France.
One route you can use is Portsmouth to Caen.

Here is part of the timetable and costs for the ferry.
The costs are for a car and up to four passengers.

Portsmouth to Caen

Times		Cost			
Depart	**Arrive**	**Fri 4th June**	**Sat 5th June**	**Sun 6th June**	**Mon 7th June**
0815	1500	£235	£245	£225	£179
1445	2130	£209	£179	£179	£165
2245	0645	£245	£275	£209	£209

Caen to Portsmouth

Times		Cost			
Depart	**Arrive**	**Fri 11th June**	**Sat 12th June**	**Sun 13th June**	**Mon 14th June**
0830	1315	£165	£165	£209	£209
1630	2115	£199	£209	£245	£245
2300	0645	£179	£199	£219	£329

Campsites

In France you can book campsites which have tents for you to stay in.

This chart shows the distances

between Caen and some campsites in France
and
between the campsites.

All distances are in kilometres (km).

	Caen	La Croix Paris	La Breche	Point St Gilles	La Foret	Lez Eaux
Caen		240	280	416	392	120
La Croix Paris	240		400	656	552	432
La Breche	280	400		370	234	240
Point St Gilles	416	656	370		270	300
La Foret	392	552	234	270		290
Lez Eaux	120	432	240	300	290	

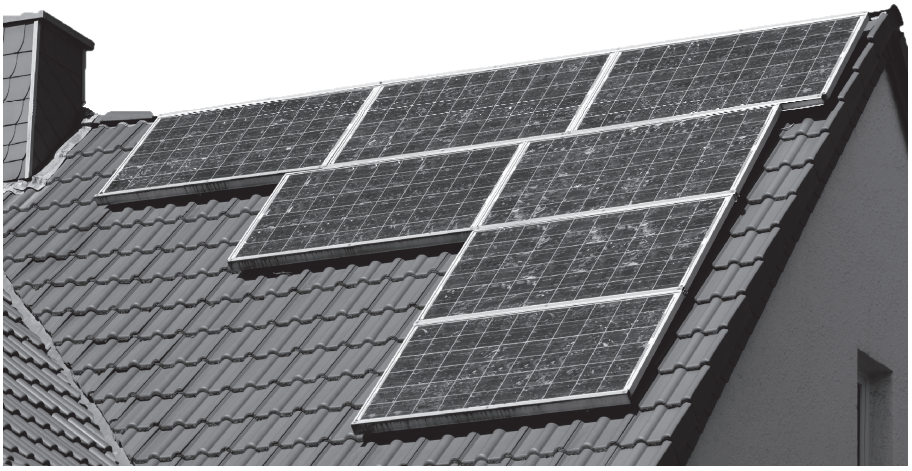
For example, the distance between La Croix Paris and La Foret is 552 km

This table shows the cost per tent **per night** at each campsite.
Each tent can sleep up to six people.

Campsite	**May**	**June**	**July**
La Croix Paris	£54	£73	£105
La Breche	£25	£54	£115
Point St Gilles	£25	£54	£115
La Foret	£29	£65	£111
Lez Eaux	£28	£52	£105

Data Sheet for Solar panels

Here are 7 solar panels on a roof.



Solar panels use sunlight to make electricity.
They work when it is cloudy, but work better when it is sunny.

If you have solar panels on your roof,

you do **not** need to buy as much electricity

you are paid for all the electricity you make.

The **capacity** of a solar panel is measured in **kilowatts** (kW).
1 kilowatt = 1000 watts

Estimating the amount of electricity made

e is the number of units of electricity made in a month.
Use these steps to estimate the value of e.

Step 1 Work out a using $a = \frac{1}{2}n + s$

n is the average number of cloudy hours per day
s is the average number of sunny hours per day

Step 2 Work out b using $b = a \times c \times f$

c is the total capacity of the solar panels in kW
f is an efficiency factor

Step 3 Work out e using $e = m \times b$

m is the number of days in the month

Example

For solar panels with a total capacity of 3 kW and an efficiency factor of 0.2

In June, when $n = 11.4$
$s = 5.5$
$m = 30$

Step 1 $a = \frac{1}{2} \times 11.4 + 5.5$

$a = 11.2$

Step 2 $b = 11.2 \times 3 \times 0.2$

$b = 6.72$

Step 3 $e = 30 \times 6.72$

$e = 201.6$

An estimate of the amount of electricity made in June is 201.6 units.

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