



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.

Data Sheet for Cars

New cars have **official** values for

- fuel efficiency – the number of miles the car travels per gallon of fuel (mpg)
- CO₂ emissions – the number of grams of CO₂ the car produces per kilometre (g/km).

Here are the official values for four cars.

	Fuel	Fuel efficiency (mpg)	CO₂ emissions (g/km)
Seat Alhambra	Diesel	47.1	158
Renault Clio	Diesel	83.1	90
Ford Galaxy	Petrol	39.2	167
Toyota Aygo	Petrol	65.7	95

Actual fuel efficiency

The **actual** fuel efficiency depends on how, when and where the car is driven. It is usually lower than the official value.

Spending on fuel

Use this formula to work out the amount, £ A , you spend on fuel.

$$A = \frac{mc}{f}$$

m is the number of miles you drive

c is the cost, in £, per gallon of fuel

f is the **actual** fuel efficiency

Vehicle tax

You must pay vehicle tax on your car.

The cost depends on the official value for CO₂ emissions for your car.

Here are some of the yearly costs of vehicle tax for new cars bought after 1 April 2017

CO ₂ emissions (g/km)	Yearly cost	
	In year 1	After year 1
1 – 50	£10	£140
51 – 75	£25	£140
76 – 90	£100	£140
91 – 100	£120	£140
101 – 110	£140	£140
111 – 130	£160	£140
131 – 150	£200	£140
151 – 170	£500	£140

Data Sheet for Transporting hamsters

Two popular breeds of hamster are Syrian hamsters and Dwarf hamsters. They are transported in cuboid boxes.

Minimum height of a box

Syrian hamsters 15.2 cm

Dwarf hamsters 12.7 cm

Minimum floor area of a box, per hamster

Age of hamster	Syrian hamsters	Dwarf hamsters
From birth to 5 weeks	45 cm ²	32 cm ²
From 5 weeks to 8 weeks	71 cm ²	48 cm ²

Windows

At least two sides of a box must have windows.

Temperature

Use this formula to convert degrees Fahrenheit (°F) to degrees Celsius (°C).

$$C = \frac{5}{9} (F - 32)$$

C is the temperature in degrees Celsius

F is the temperature in degrees Fahrenheit

END OF DATA

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