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Functional Skills Certificate
FUNCTIONAL MATHEMATICS

Level 1

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 you wish to have marked is written in the spaces provided in the question/answer book.

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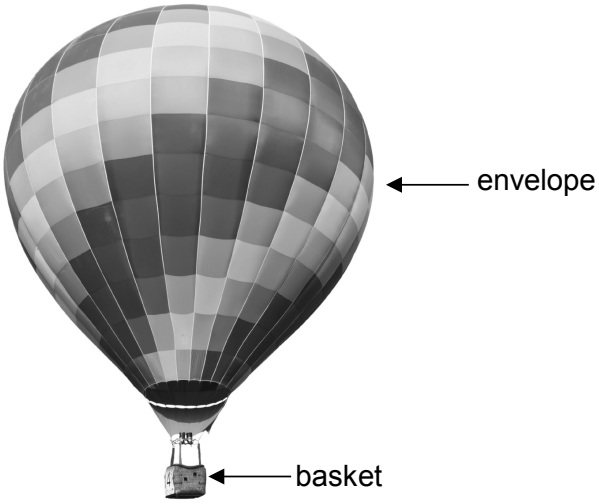
Data sheet for Hot Air Balloon

A hot air balloon has an envelope and a basket.



The basket holds the pilot and passengers.

Pilot qualification

Private balloon pilots can qualify to carry passengers.
To qualify, they must

- complete 10 flights
- complete 35 hours of flying
- be the pilot of a balloon that safely rises to 5000 feet
- pass written and practical tests.

Envelope volume

The volume of the envelope is measured in m^3
An envelope with a volume of 2800 m^3 can lift a basket holding up to 5 people.

Height

Use these steps to convert height in metres to height in feet.

Step 1	Work out	height in metres ÷ 3
Step 2	Work out	answer to **Step 1** × 10

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Data sheet for Room Makeover

Heat output of a radiator

The heat output of a radiator is measured in British Thermal Units per hour (BTU per hour).
Different types of room need radiators with different heat outputs.

The table shows the room factor for different types of room.

Room type	Room factor
Living, dining, bathroom	177
Bedroom	141
Kitchen, stairs, hallway	106

A living room has a higher room factor than a kitchen because it needs more heat.

Use these steps to work out the **minimum** heat output needed for a room.
All measurements are in metres.

Step 1 Work out length of room × width of room

Step 2 Work out answer to **Step 1** × height of room

Step 3 Work out answer to **Step 2** × room factor

The answer to **Step 3** is the minimum BTU per hour needed.

Radiator size

This table shows some radiator sizes and their heat output in BTU per hour.

Length (mm)	Heat output (BTU per hour)
500	1768
600	2122
700	2475
800	2829
900	3182
1000	3536

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Example

Jenny wants a radiator for her kitchen.

For a kitchen the room factor is 106

The room has length 4 m, width 3 m and height 2.5 m

Step 1 4 × 3 = 12

Step 2 12 × 2.5 = 30

Step 3 30 × 106 = 3180

The kitchen needs a minimum of 3180 BTU per hour.

The smallest radiator Jenny should choose has length 900 mm

Buying and laying carpet

Some shops sell carpet pieces left over from a large roll of carpet.

Sometimes you can buy a piece that is exactly the right size for your room.

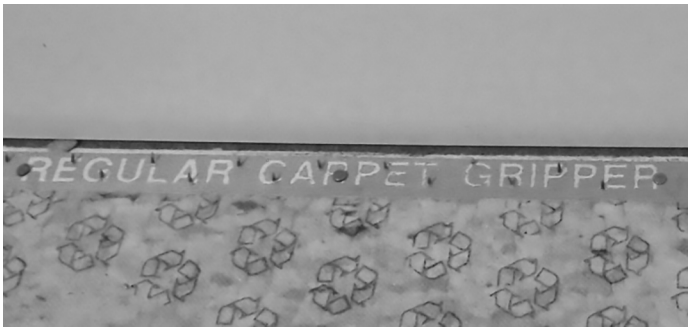
Underlay should be put on the floor first.

It is usually sold by the square metre.

It can be cut to fit the floor of the room.

The carpet is put on top of the underlay.

It is held in place using **gripper rods** around the edges of the room.



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