

Functional Skills Certificate

XXXX/2



**MATHEMATICS**  
**Functional Mathematics Level 2**  
**Data Sheet (Pre-release)**

This data sheet can be used with candidates from:

\*\*\*\*\*day \*\*\*\*\* 20\*\*

**Instructions**

- You may write notes in this copy of the Data Sheet, but you will **not** be allowed to bring this copy, or any other notes you may have made, into the examination.
- You will be given a new Data Sheet at the start of the examination containing all the information on this sheet.

**FMC/PR/L2**

### Data Sheet for Car Journeys

Your carbon footprint is a measure of how much carbon dioxide (CO<sub>2</sub>) is produced by your everyday activities.

If you go on a car journey an amount of CO<sub>2</sub> is added to your carbon footprint.

This is because of the CO<sub>2</sub> emissions from the car's engine.

This example shows how to work out the number of kilograms of CO<sub>2</sub> to add to your carbon footprint when you go on a car journey.

|                             |                                |
|-----------------------------|--------------------------------|
| Name of car                 | Hyundai Santa Fe               |
| CO <sub>2</sub> emissions   | 191 grams per kilometre (g/km) |
| Length of journey           | 448 kilometres                 |
| Number of people in the car | 4                              |

$$\begin{aligned} \text{Total CO}_2 \text{ emissions from the car's engine} &= 191 \times 448 \\ &= 85\,568 \text{ grams} \\ &= 85.568 \text{ kilograms} \end{aligned}$$

$$\begin{aligned} \text{Total CO}_2 \text{ emissions from the car's engine} &= 85.568 \div 4 \\ &= 21.392 \text{ kilograms} \\ &= 21.4 \text{ kg to 1 decimal place} \end{aligned}$$

21.4 kg of CO<sub>2</sub> is added to the carbon footprint of each person in the car.

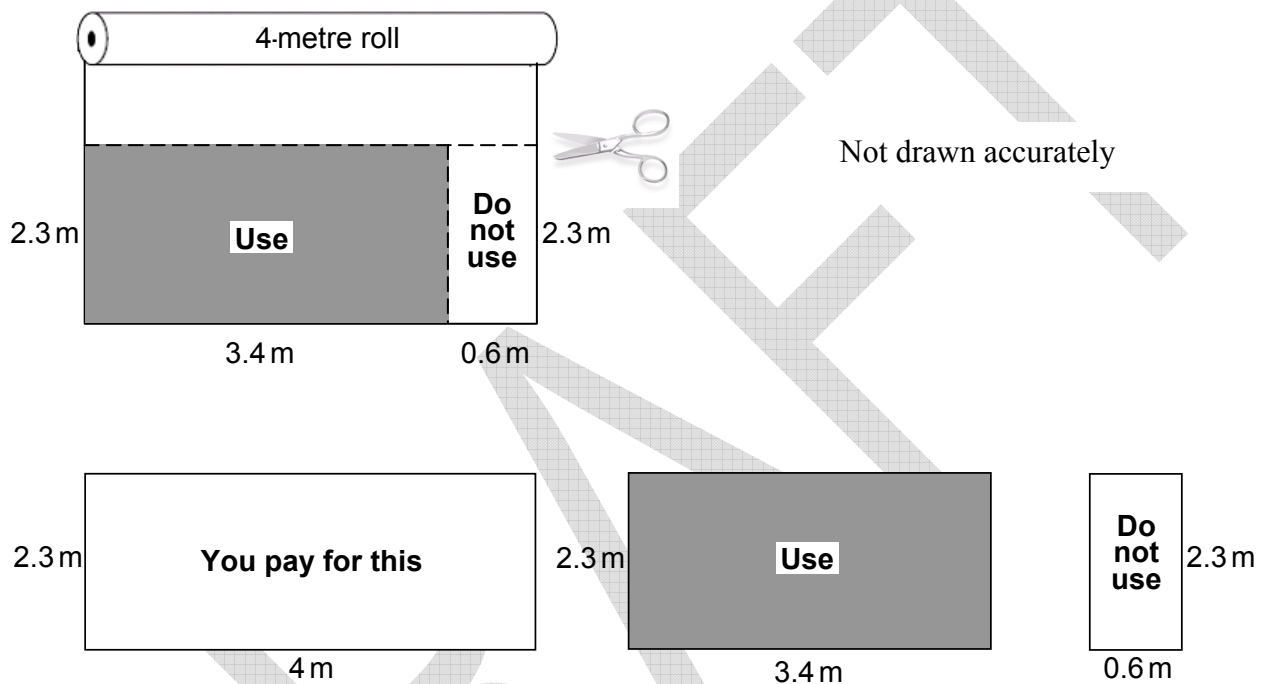
## Data Sheet for Buying Carpets Online

Carpet is sold from either 4-metre wide rolls or 5-metre wide rolls.  
The cost per square metre is the same for both rolls.

Often, when you buy a carpet, you do **not** use all the carpet you pay for.

### Example

You want to buy a carpet for a rectangular room measuring 3.4 metres by 2.3 metres.  
One way to do this is to cut a 2.3 metre length from a 4-metre wide roll.



You **pay** for a 4 metre by 2.3 metre rectangle of carpet.  
You **use** a 3.4 metre by 2.3 metre rectangle of carpet.  
You **do not use** a 2.3 metre by 0.6 metre rectangle of carpet.

Another way to buy this carpet is from a 5-metre wide roll.  
This means that a bigger area of carpet is **not** used.

A company called *Carpets Online* sells the carpets shown in this table.

| High Point Twist          | Rough Twist                | California Dream           | Essentials                 |
|---------------------------|----------------------------|----------------------------|----------------------------|
| £ 7.99 per m <sup>2</sup> | £ 10.99 per m <sup>2</sup> | £ 12.99 per m <sup>2</sup> | £ 14.99 per m <sup>2</sup> |

There are no data printed on this page

DRAFT