

REASONING

7ER16

First name _____

Last name _____

School _____

Class _____

Date of birth ○○ ○○ ○○○○

Date of test ○○ ○○ 2016

Total score (maximum 20)



139144

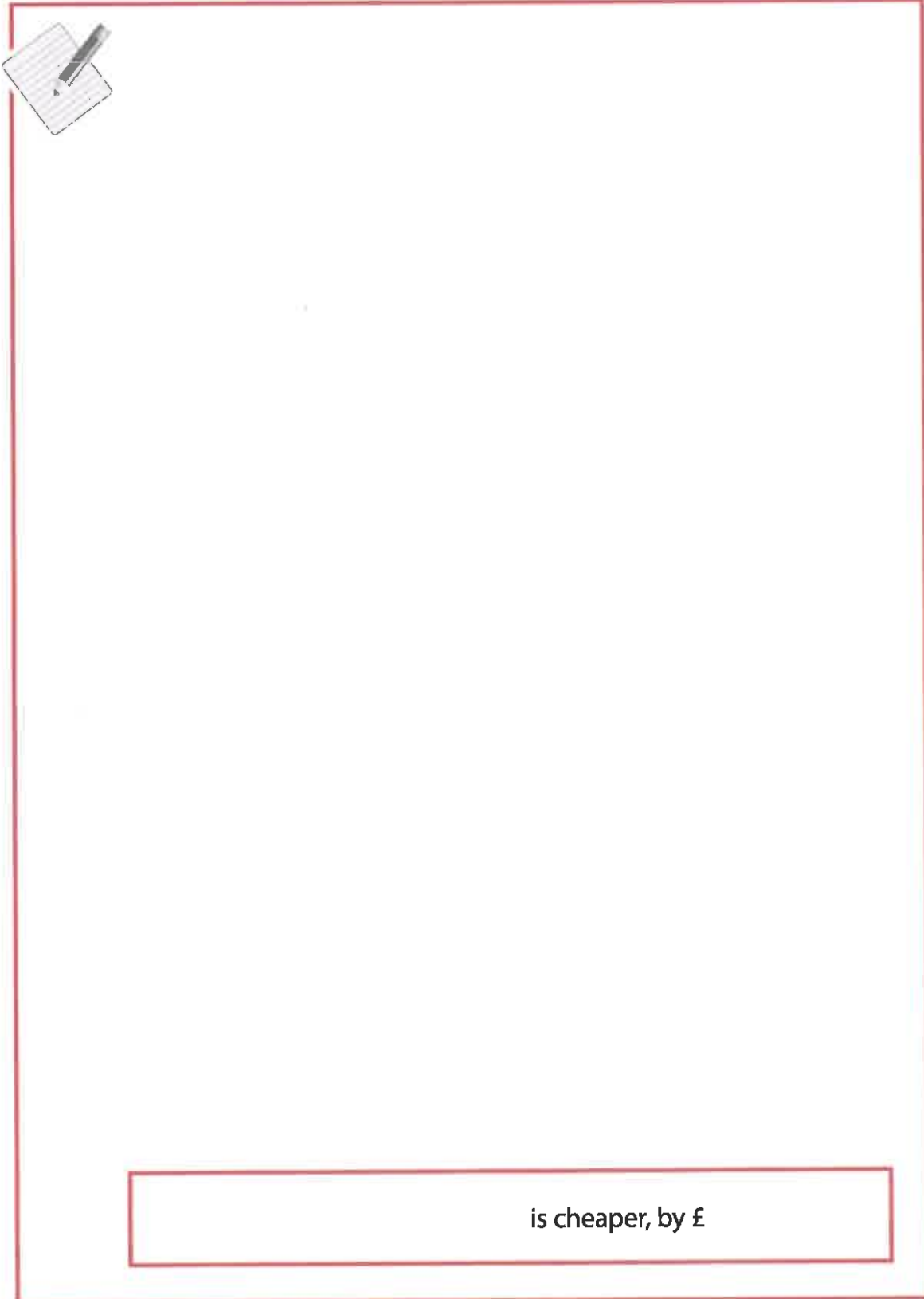


Llywodraeth Cymru
Welsh Government

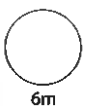
1 Use the information on the next page.

Work out which day out would be cheaper, and by how much.

You **must** show how you work it out.



is cheaper, by £



Information:



**14 young people and 2 adults
are going on the day out.**



**The minibus costs
£1.50 for every mile driven.**

Climbing centre



**The climbing centre costs
£7.50 for each young person,
£10 for each adult.**

**It is 73 miles there and
73 miles back.**

Forest adventure



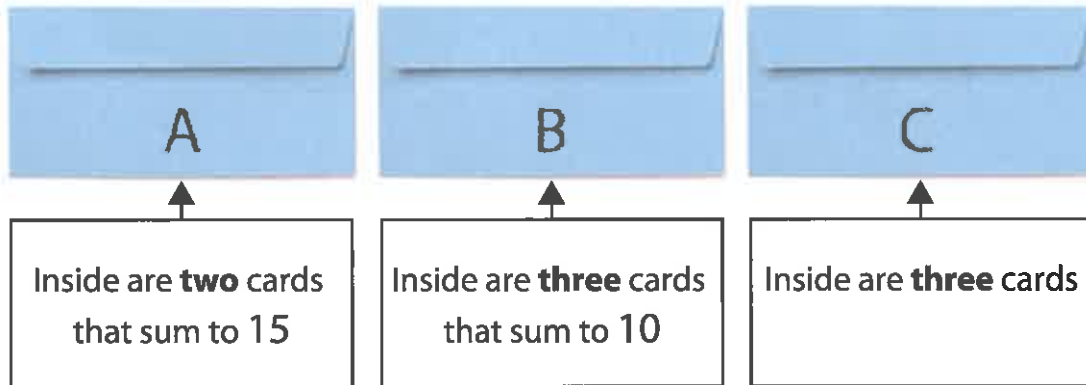
**The forest adventure costs
£18 for each young person,
£20 for each adult.**

**It is 16 miles there and
16 miles back.**

2 Jed has eight number cards:



He places all eight of his cards inside three envelopes.



Which three cards could be inside envelope C?

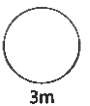
There are **three** possible answers. Give them all.

A large red-bordered box containing a notepad icon with a pencil in the top left corner. Below the icon are three rows of blank pink cards, each row starting with the word "or" and followed by three cards separated by commas and the word "and".

or [] , [] and []

or [] , [] and []

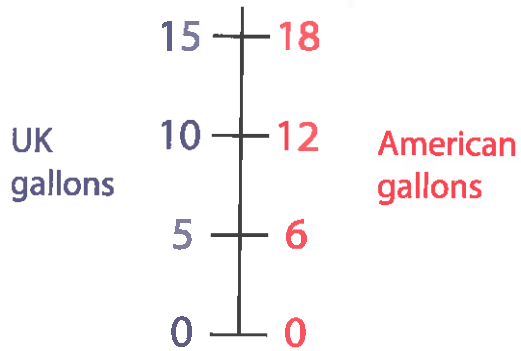
or [] , [] and []



- 3 A gallon of liquid in America is different from a gallon of liquid in the United Kingdom (UK).

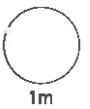


The scale shows how.



Convert 2.5 UK gallons to American gallons.

American gallons

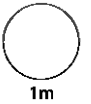


Now convert 32.5 UK gallons to American gallons.

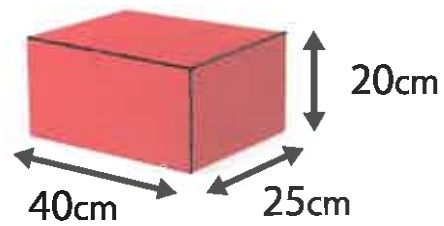
American gallons



- 4 If you know what $\frac{1}{3}$ of a number is, how can you find $\frac{1}{6}$ of the same number?



- 5 Megan has this box, a cuboid, to be gift-wrapped.



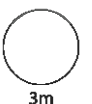
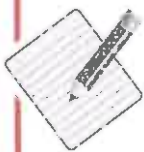
She wants ribbon to go all the way round the box like this:



↑
The bottom will look the same as the top.

She has 2 metres of ribbon.

Is that enough? Show how you know.



6 Children sell tickets at their school fete.



Each ticket costs **10p**

Win **50p** if the number on your ticket ends in **0** or **5**

They sell 80 tickets, numbered 1 to 80

Show why they do not make a profit.



A large rectangular box with a red border, intended for writing an explanation.

2m

To make £20 profit, how much should each of the 80 tickets cost?



A large rectangular box with a red border, intended for writing an answer. A smaller rectangular box with a red border is located in the bottom right corner, containing the letter 'p'.

2m

TOTAL

8m

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