

REASONING

8ER14

First name _____

Last name _____

School _____

Class _____

Date of birth

Date of test

Total score (maximum 20)

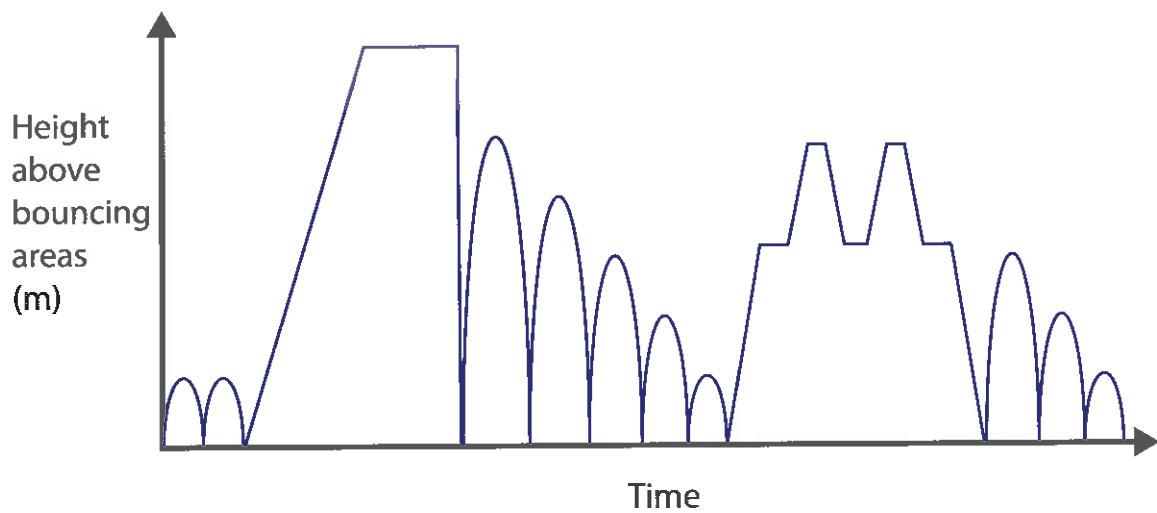


117611



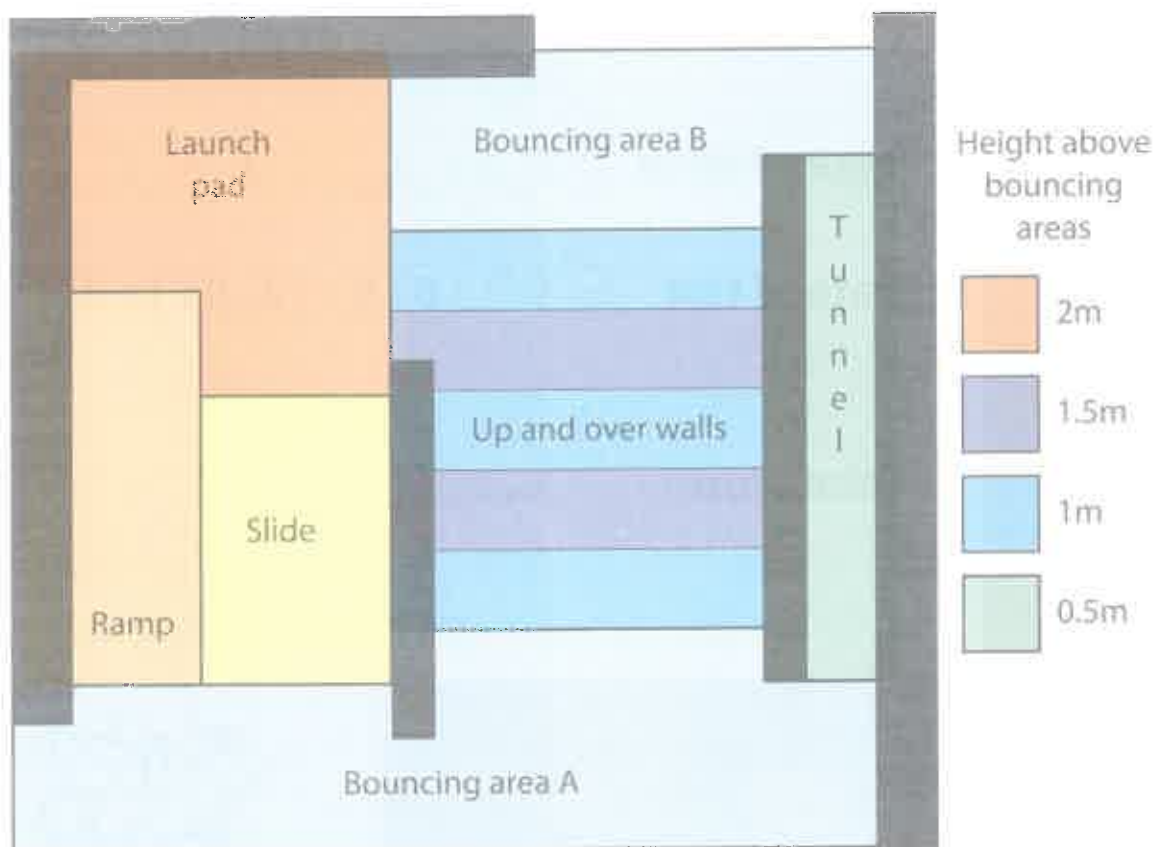
Llywodraeth Cymru
Welsh Government

- 1 The sketch shows information about David's route on the Mega Bouncer.

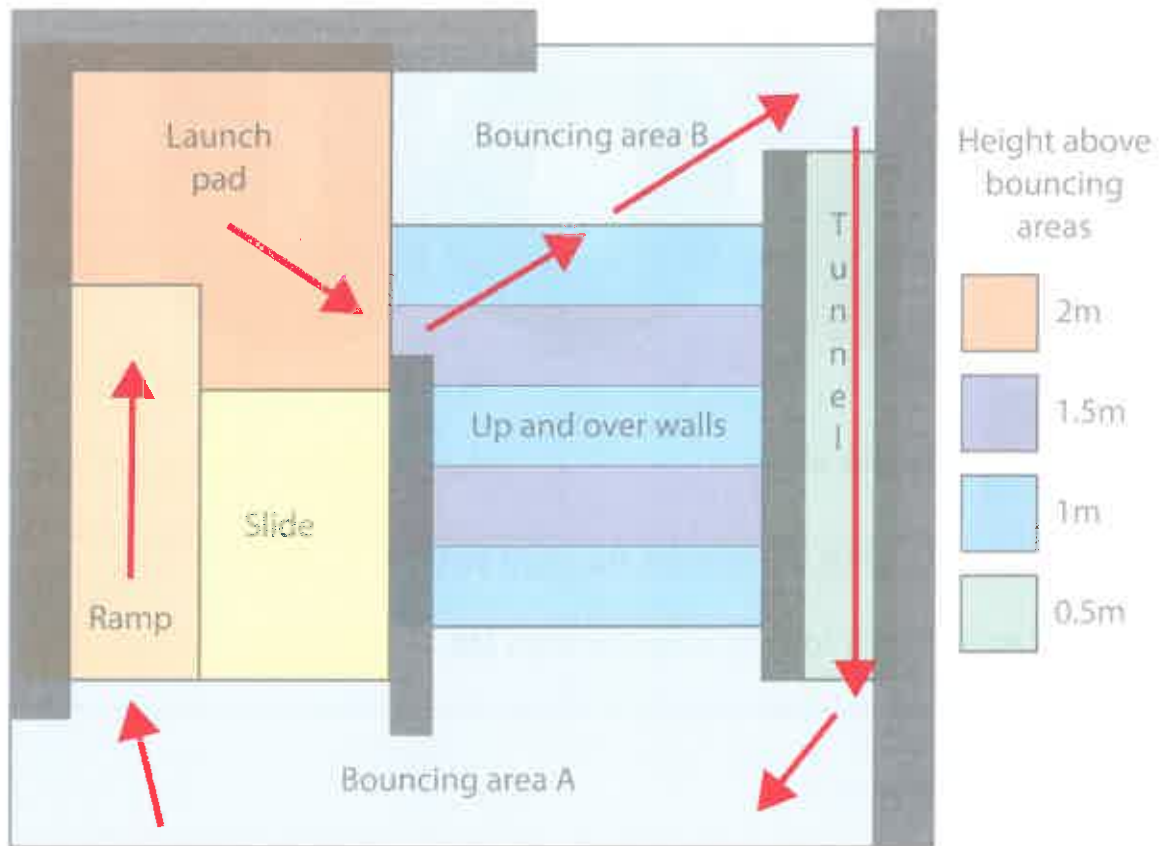


Show David's route on the plan.

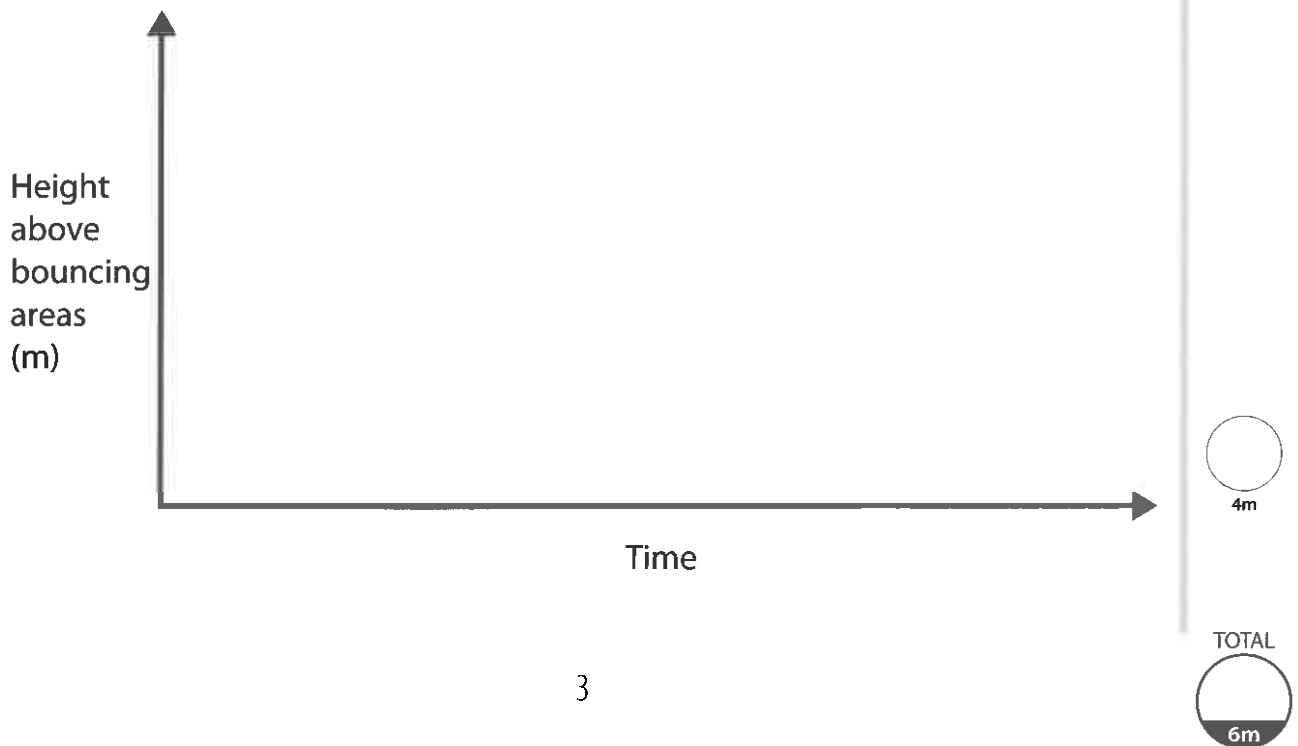
Use arrows  to show the direction.



The plan below shows Jenny's route on the Mega Bouncer.



Sketch a graph to show all this information.



- 2 A company sells huge letters.

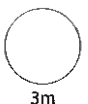


Each letter is the **same** price.

Altogether, it costs **£58.50** to make the word **YOU**.

Work out how much it costs to make the word **ME**.

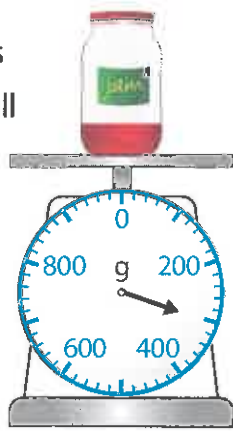
£



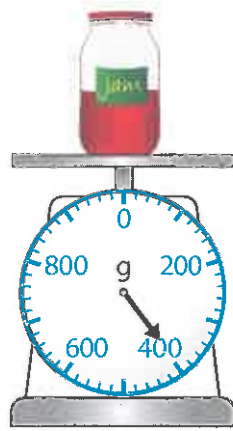
3m

3

Jar is $\frac{1}{4}$ full



Jar is $\frac{1}{2}$ full



What does a **full** jar of jam weigh?

[Hint: the answer is not 800 grams.]







grams

2m

4

The photograph shows floor tiles that are regular hexagons.

The **perimeter** of the blue tile is **120cm**.



What is the total length of the edges shown in red?



cm

2m

TOTAL

7m

5 Sunscreen helps to protect skin from burning in the sun.

You can work out what **percentage** of the sun's rays is blocked by using the number on the front:



$$\text{Percentage blocked} = \frac{3}{4} \times 100 = 75\%$$

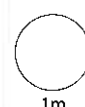


$$\text{Percentage blocked} = \frac{13}{14} \times 100 = 93\%$$

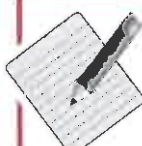


$$\text{Percentage blocked} = \frac{24}{25} \times 100 = 96\%$$

What percentage of the sun's rays is blocked by a sunscreen with **16** on the front?

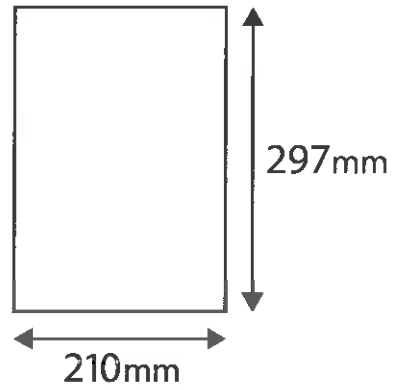
 %

What number on the front will block **90%** of the sun's rays?

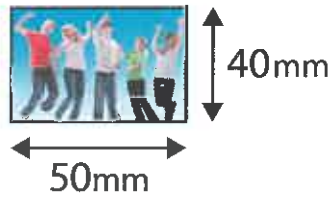




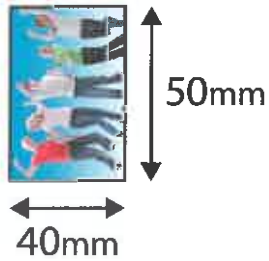
- 6 Molly wants to print lots of copies of a photograph onto this A4 sheet of paper.



She can print them **all** this way:



Or she can print them **all** this way:



Which way will give her the **greater** number of photographs?

Show calculations to explain how you know.

A large rectangular area with a red border, intended for writing calculations. In the top-left corner, there is a small icon of a notepad with a pen.