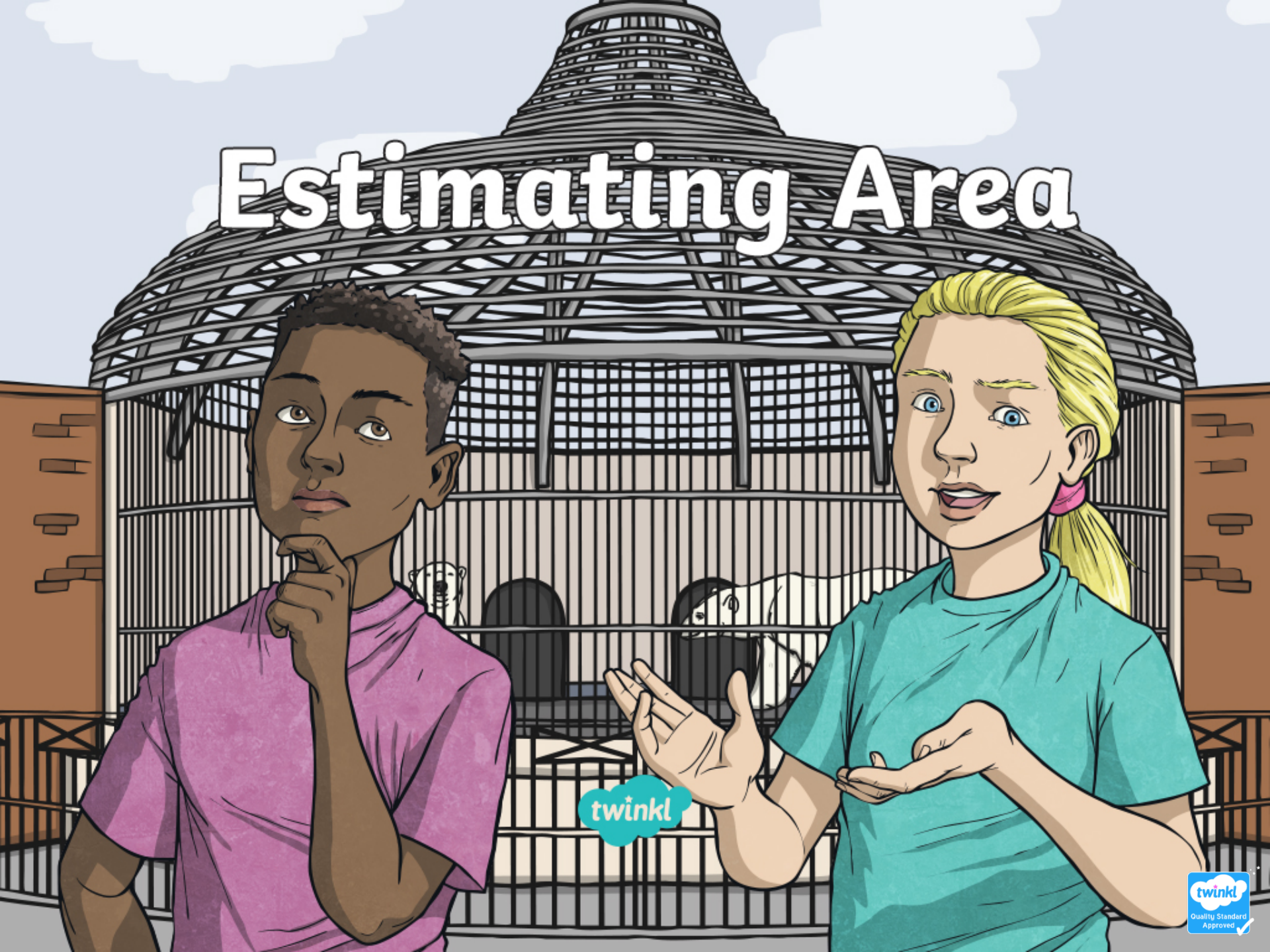


# Estimating Area

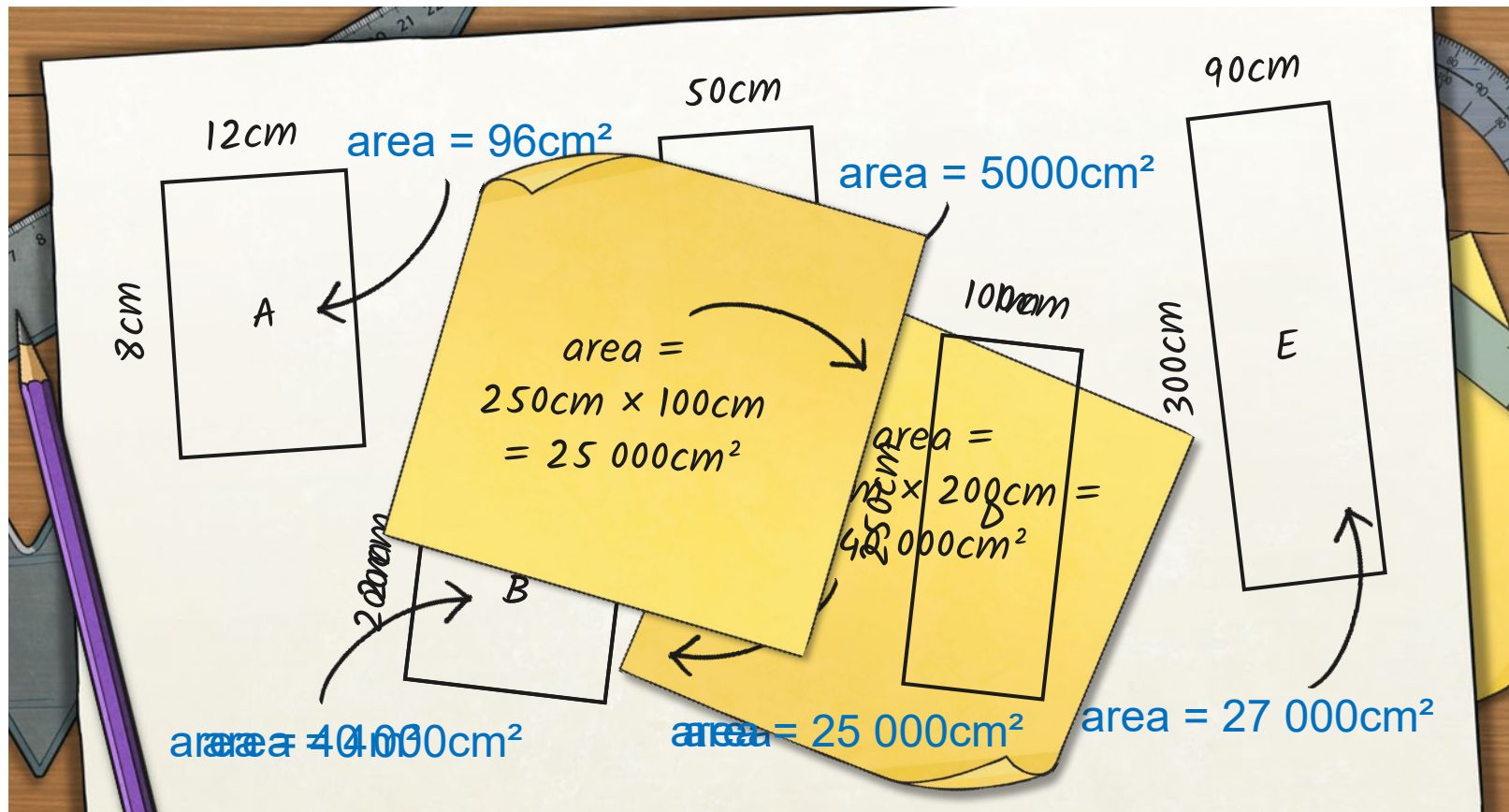


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# Order, Order!



Here we have some different shapes. Calculate their area and order them from smallest to largest area. Order the shapes by area. Then we can find out which is the largest area. The shapes are not drawn to scale.

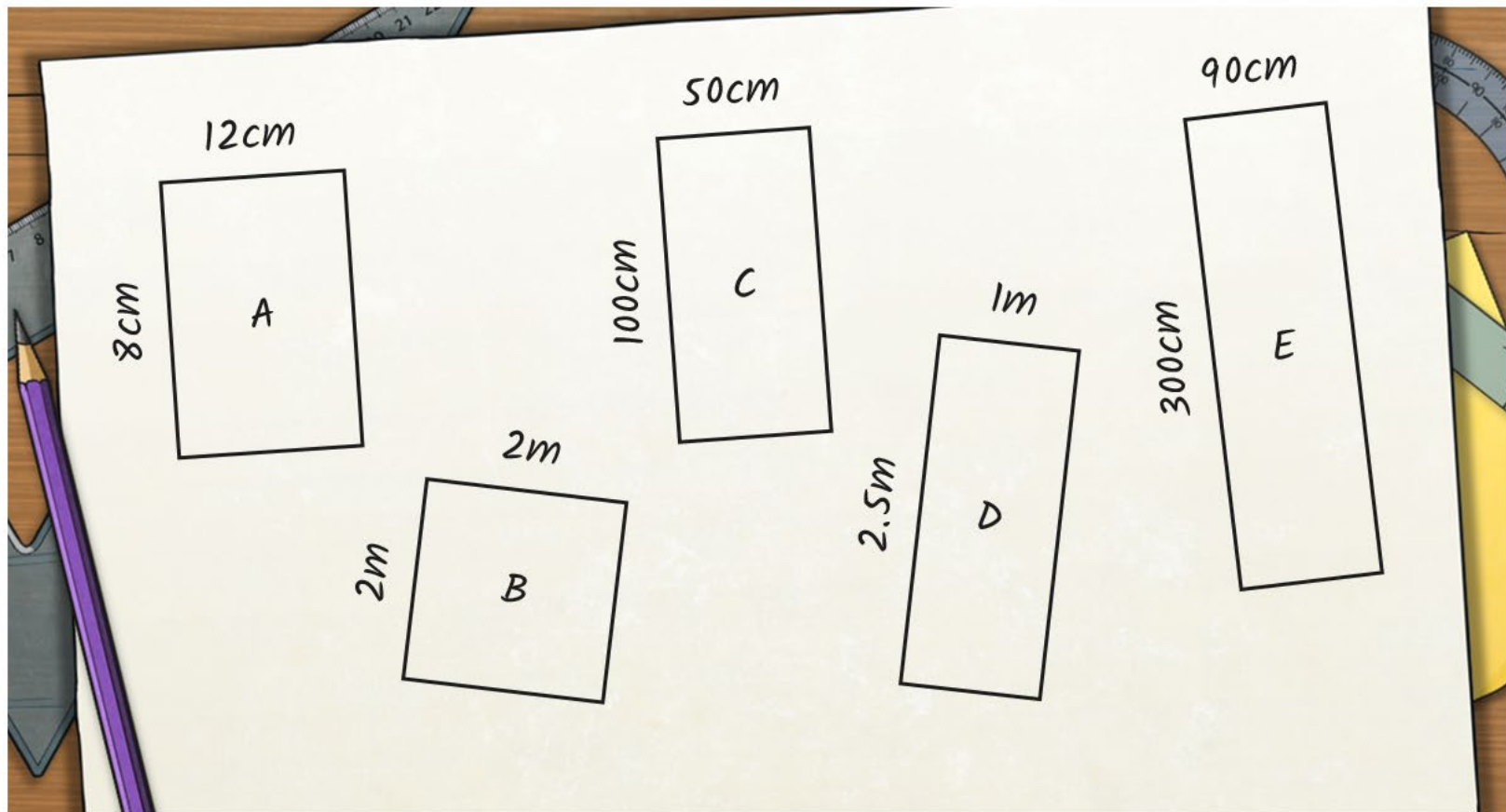




# Order, Order!



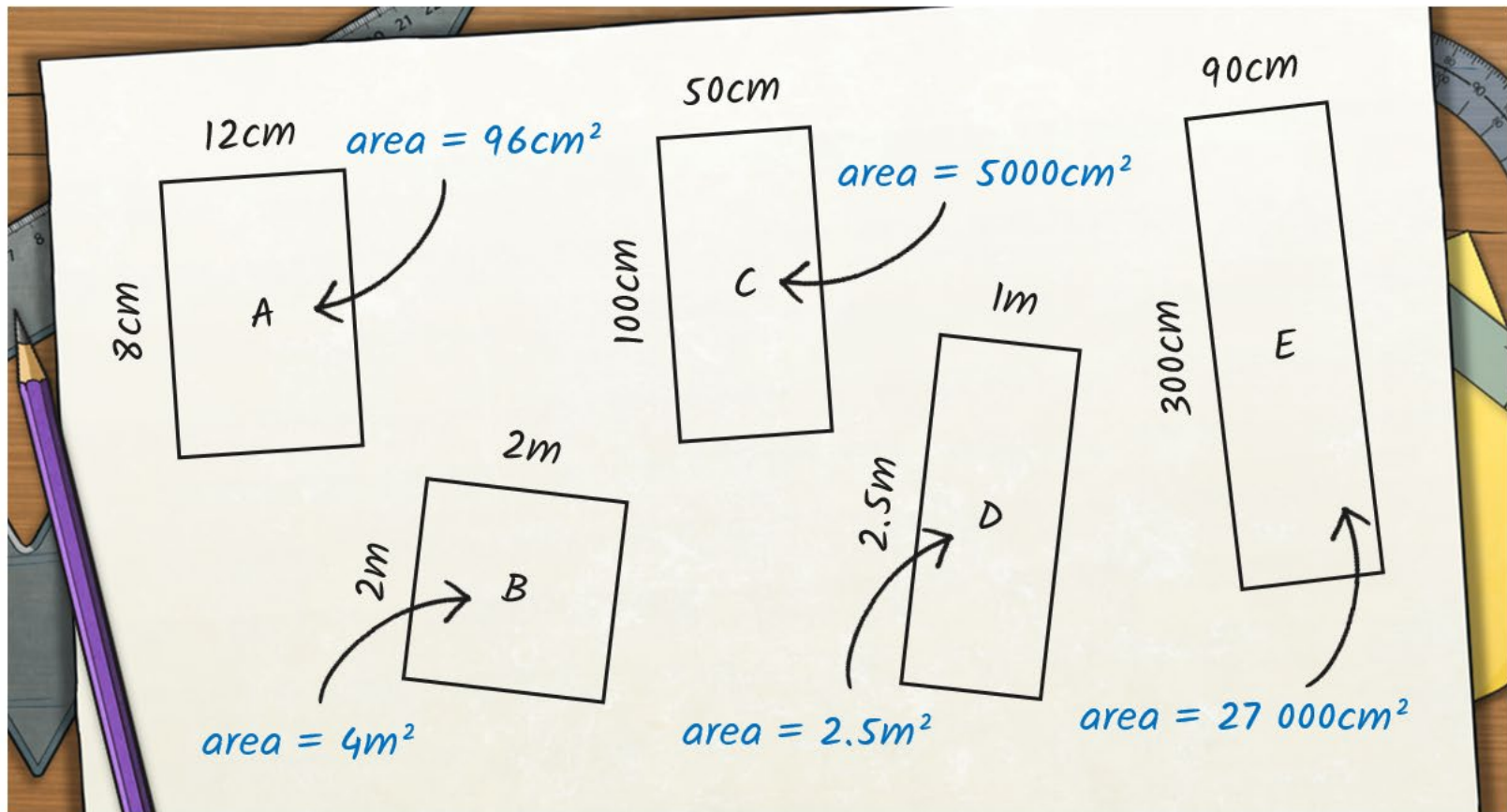
Here are some different shapes. Calculate their area and order them from smallest to largest area. The shapes are not drawn to scale.



# Order, Order!



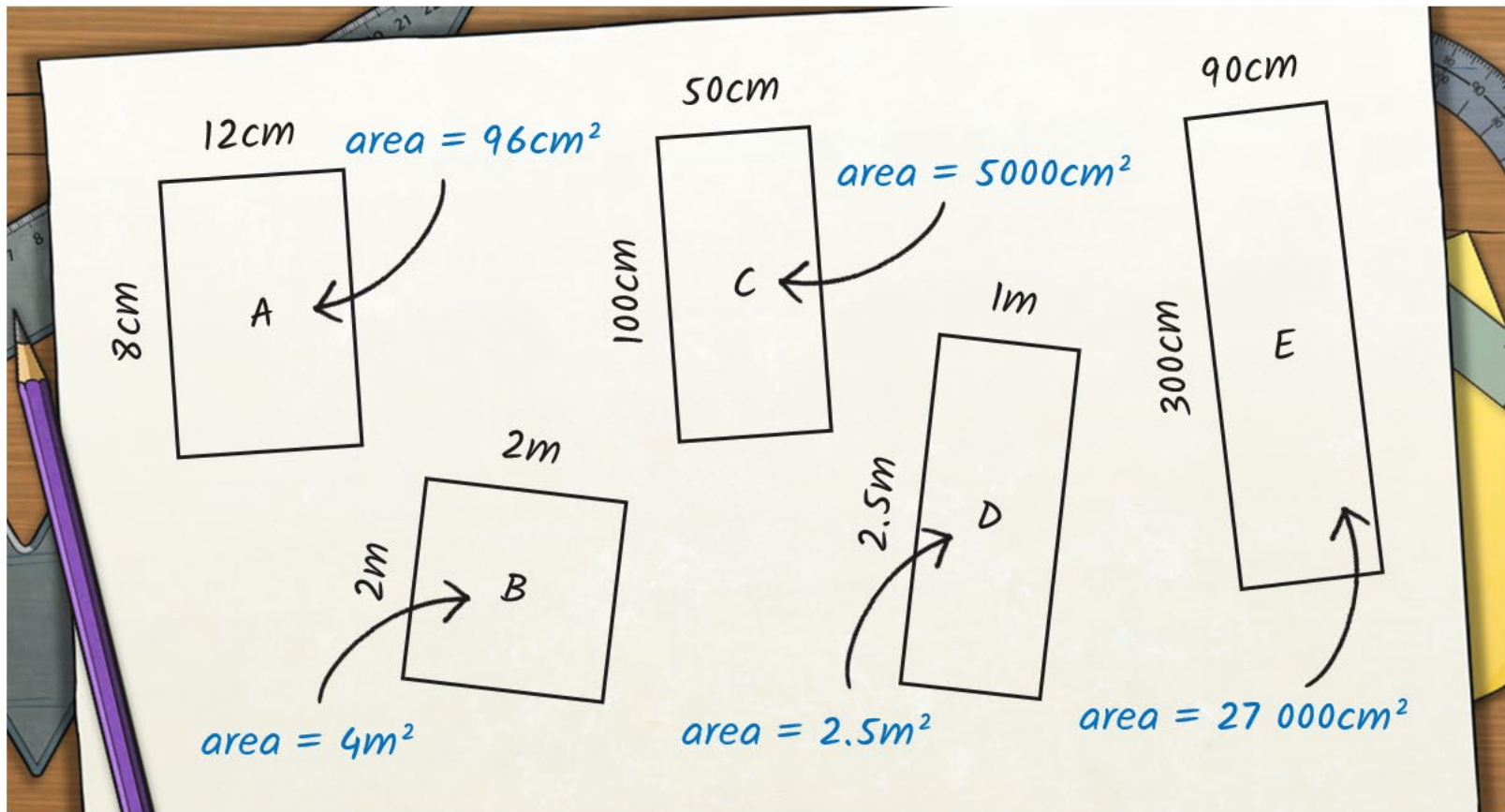
Here are some different shapes. Calculate their area and order them from smallest to largest area. The shapes are not drawn to scale.



# Order, Order!



How can we convert metres to centimetres?

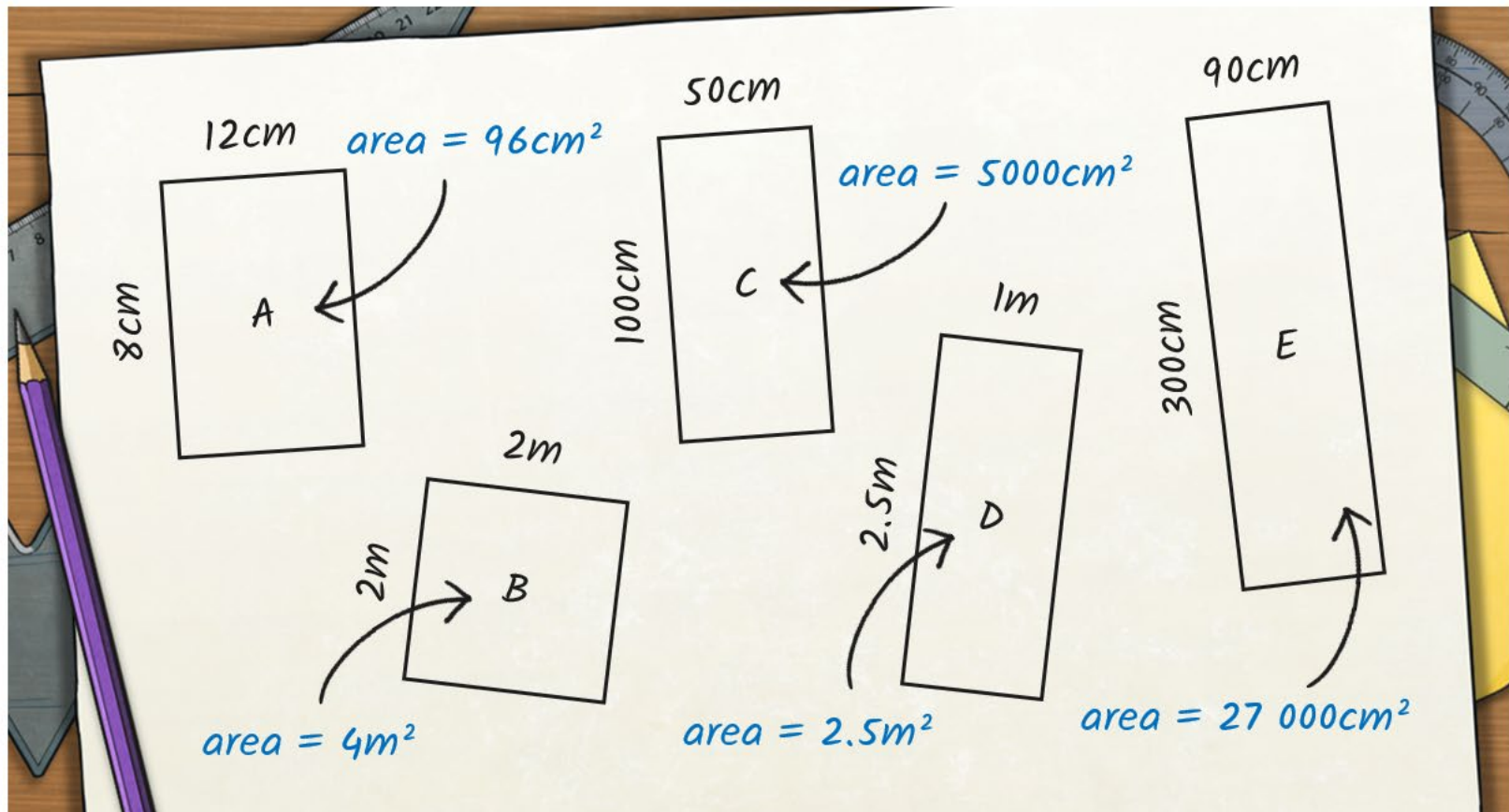




# Order, Order!



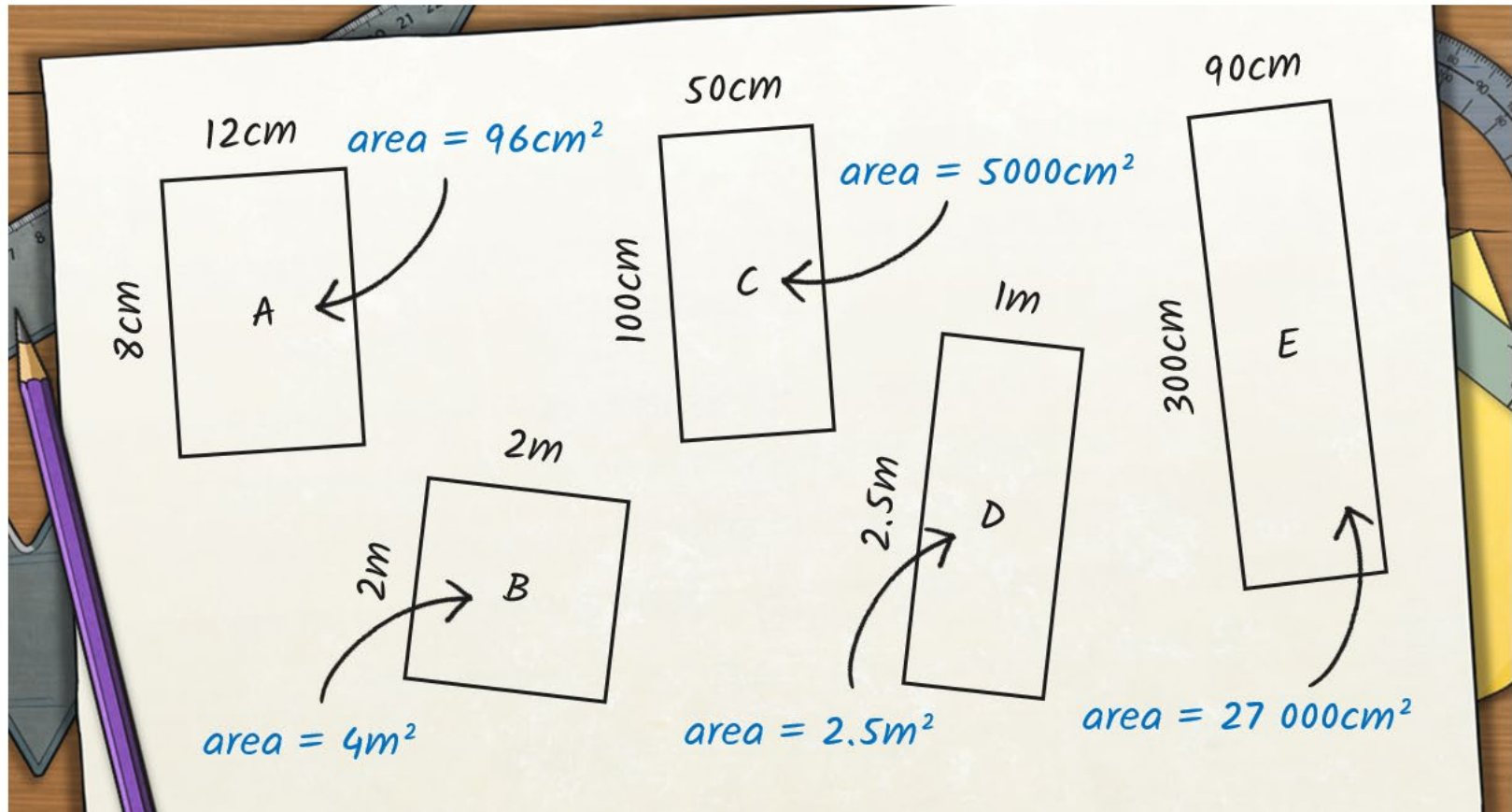
We convert metres to centimetres by multiplying the measurements by 100.



# Order, Order!



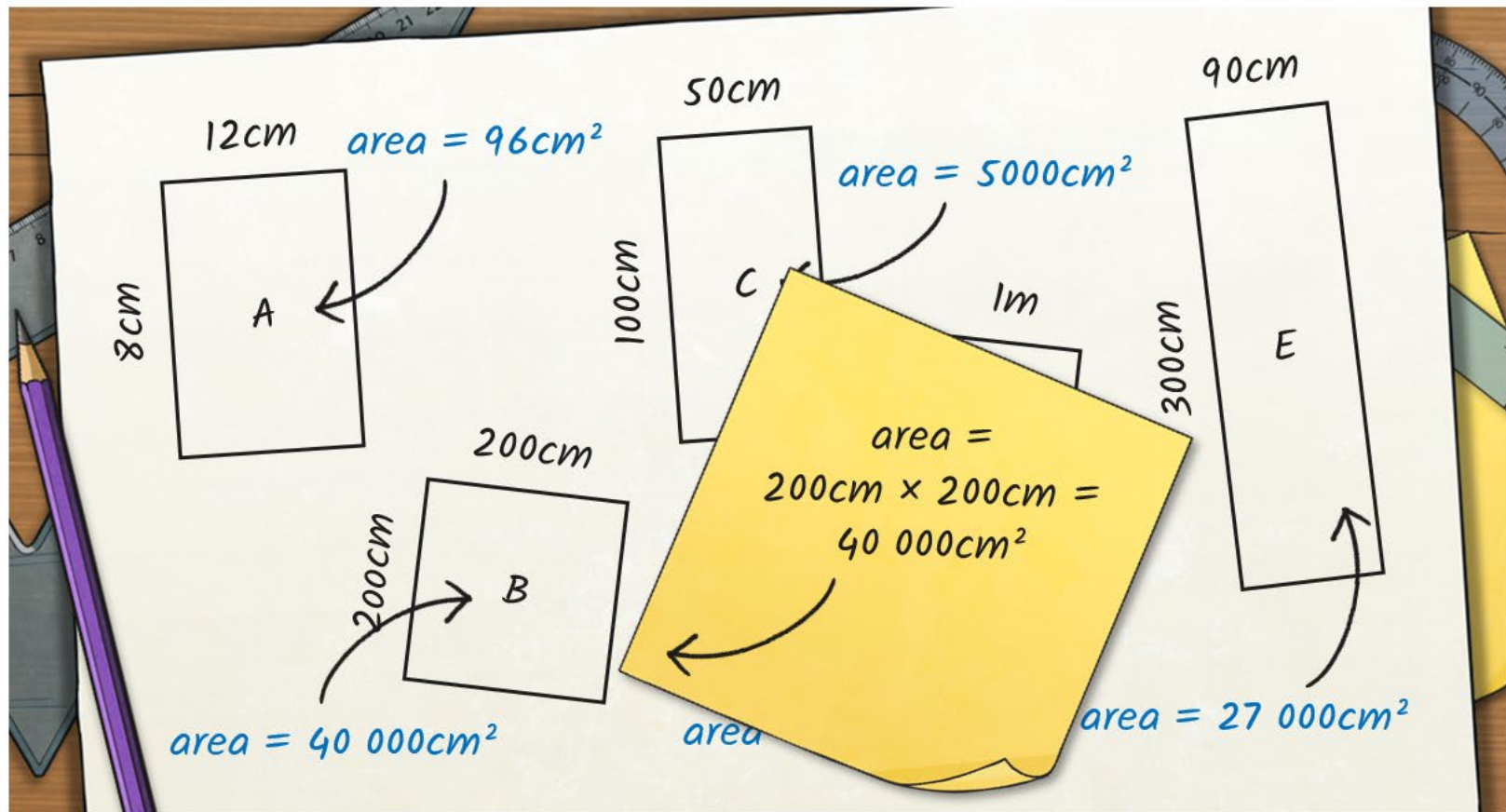
We convert metres to centimetres by multiplying the measurements by 100.



# Order, Order!



Then we can find the area in centimetres and order the shapes by area.

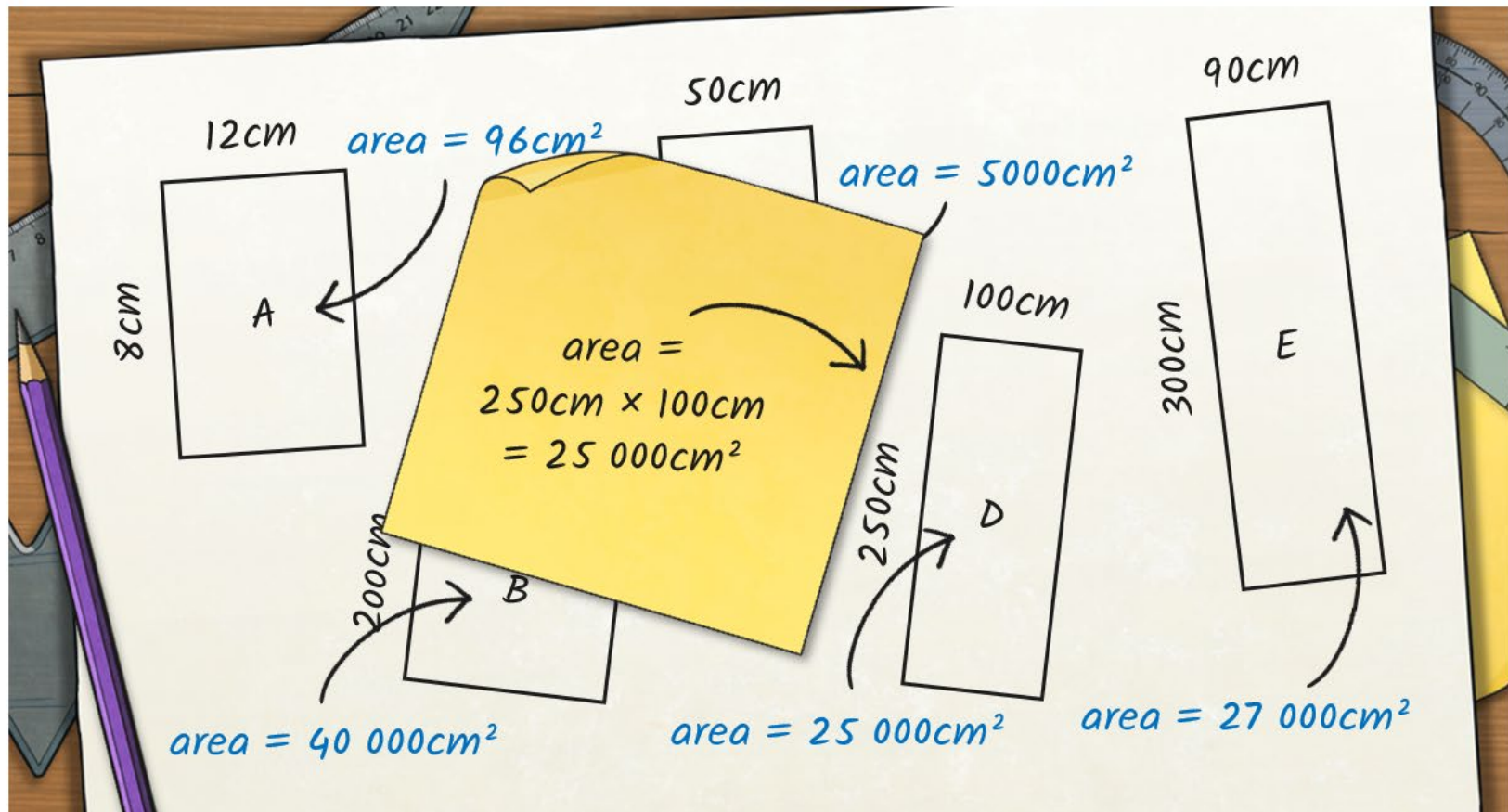




# Order, Order!



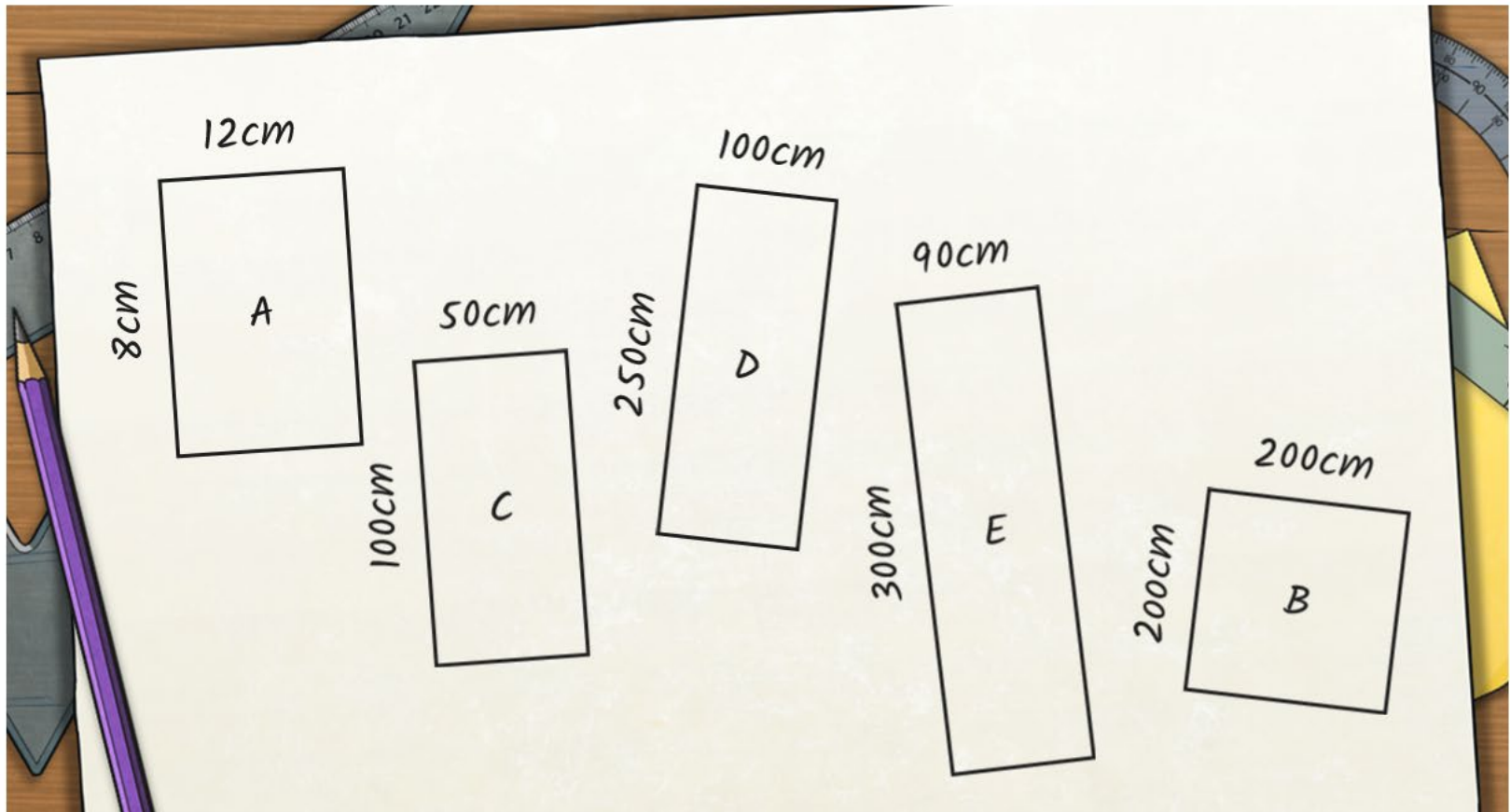
Then we can find the area in centimetres and order the shapes by area.



# Order, Order!



Order = A, C, D, E, B



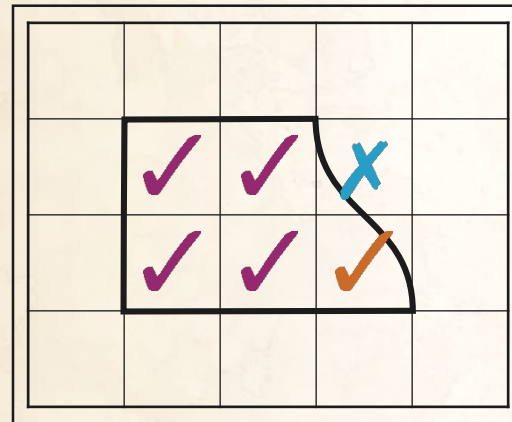
# Estimating the Area of Irregular Shapes



Here is an irregular shape. We can estimate the area by counting squares.

Add the whole squares and  
Next, count the squares  
half filled squares together:  
which are half filled.  
Do not count the squares  
more than half filled.  
that are less than half

filled  
There is 1 square filled  
The area of this shape is  
approximately 5 squares.





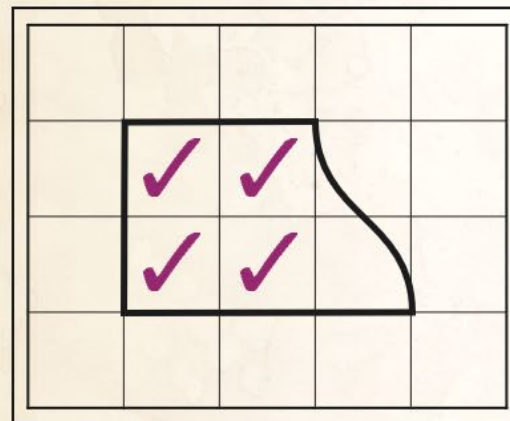
# Estimating the Area of Irregular Shapes



Here is an irregular shape. We can estimate the area by counting squares.

First, count the *whole squares*.

There are *4 whole squares*.



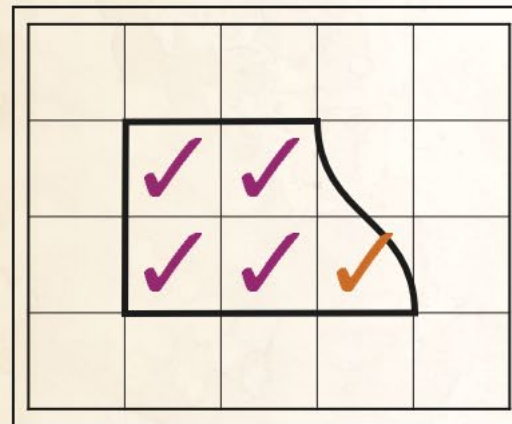
# Estimating the Area of Irregular Shapes



Here is an irregular shape. We can estimate the area by counting squares.

Next, count the squares which are *half filled or more than half filled*.

There is *1 square filled half or more*.

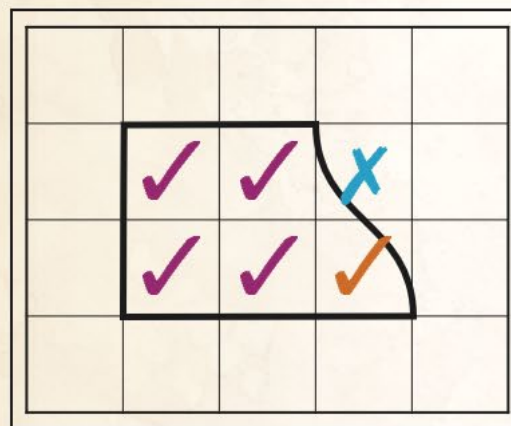


# Estimating the Area of Irregular Shapes



Here is an irregular shape. We can estimate the area by counting squares.

Do not count the squares that are *less than half filled*.





# Estimating the Area of Irregular Shapes

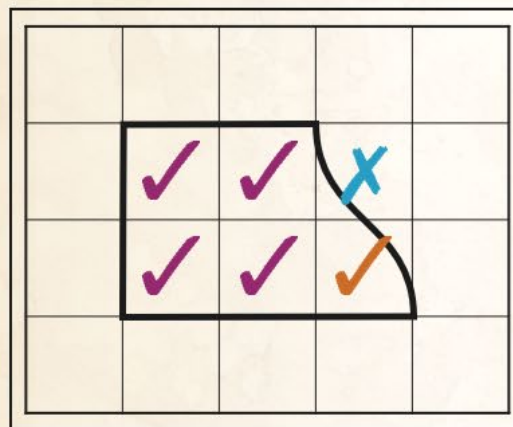


Here is an irregular shape. We can estimate the area by counting squares.

Add the *whole squares* and *half filled squares* together:

$$4 + 1 = 5 \text{ squares}$$

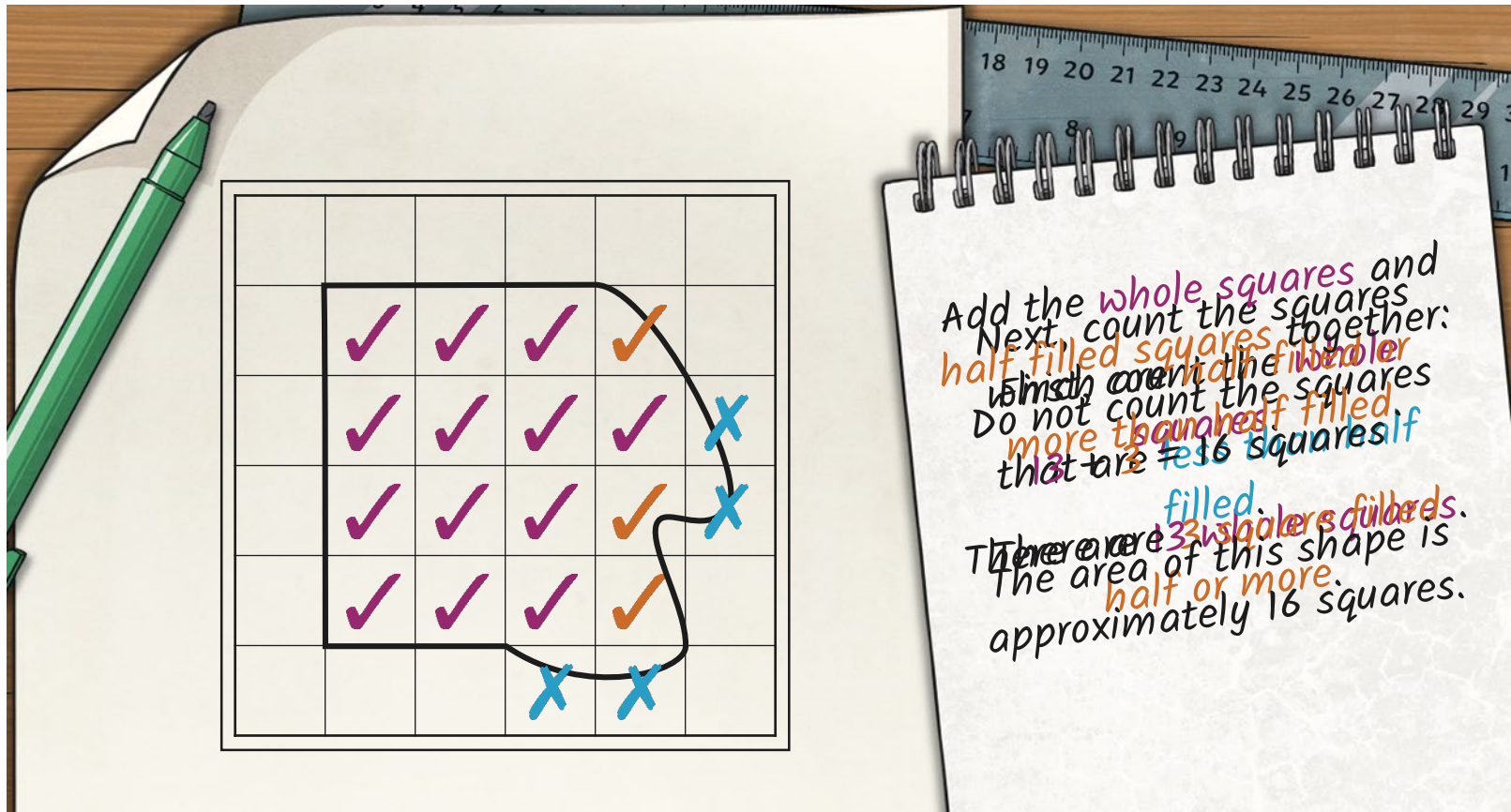
The area of this shape is approximately 5 squares.



# Estimating the Area of Irregular Shapes



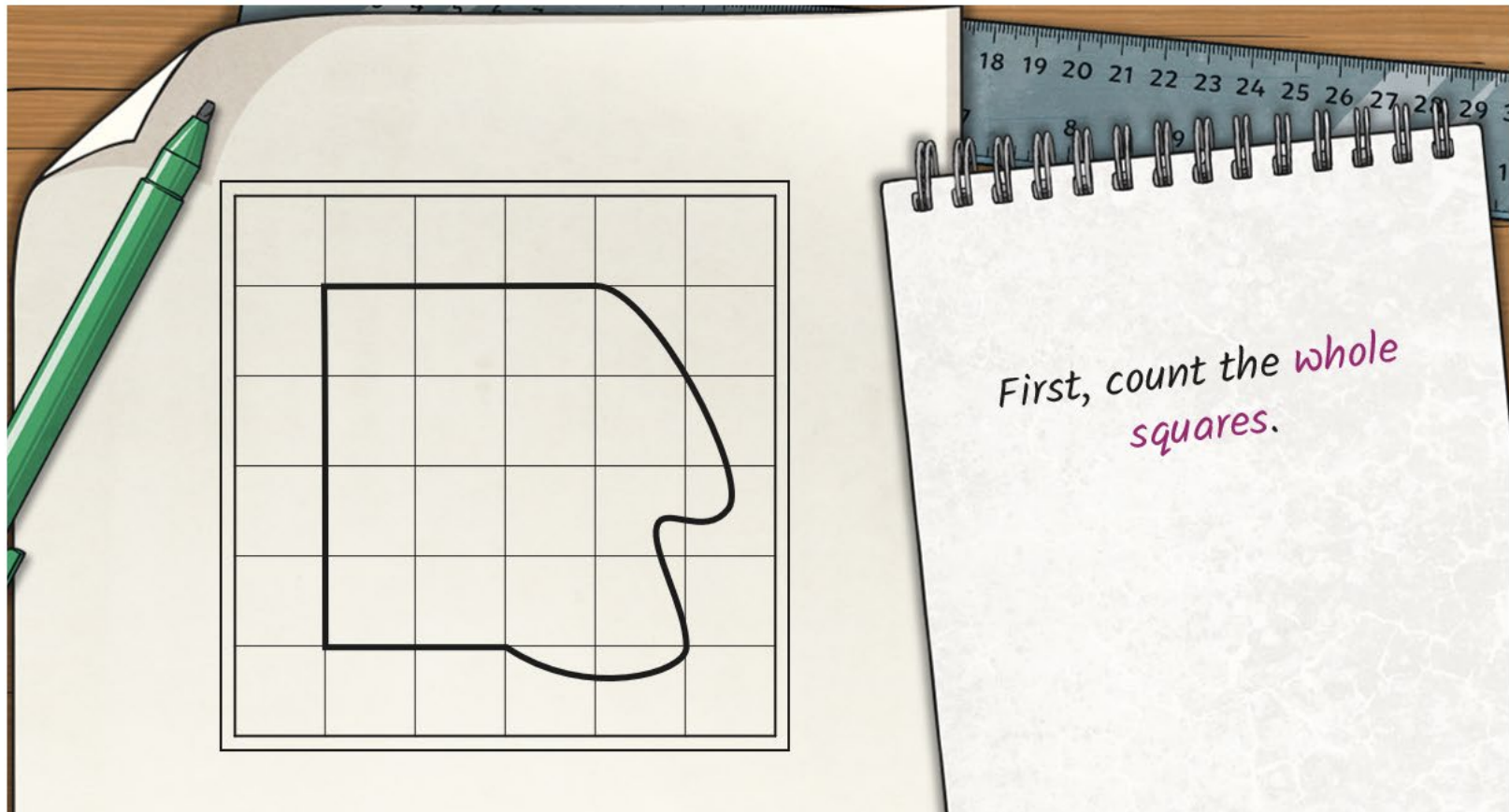
Here is another irregular shape.  
We can estimate the area by counting squares in the same way.



# Estimating the Area of Irregular Shapes



Here is another irregular shape.  
We can estimate the area by counting squares in the same way.

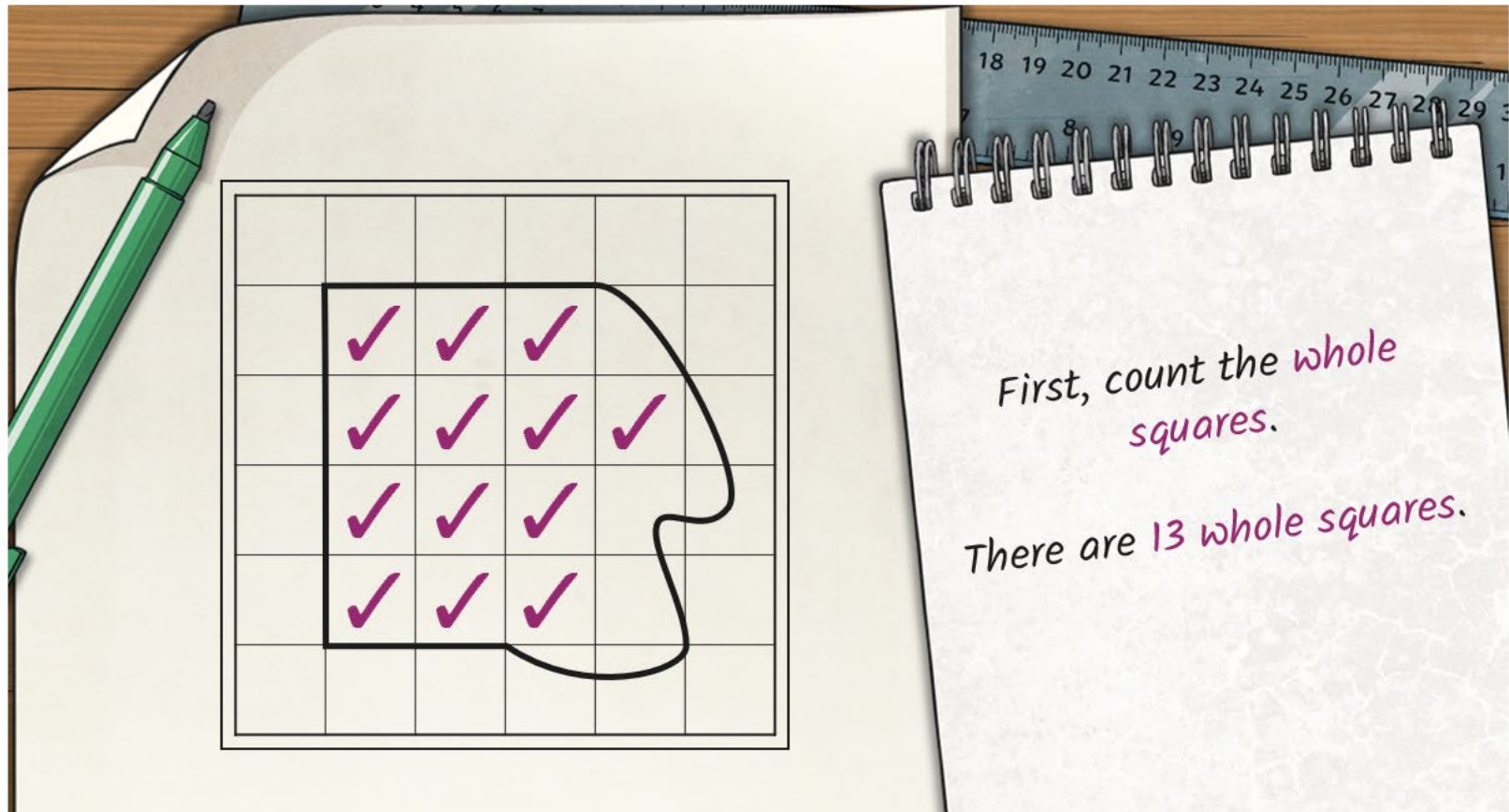




# Estimating the Area of Irregular Shapes



Here is another irregular shape.  
We can estimate the area by counting squares in the same way.

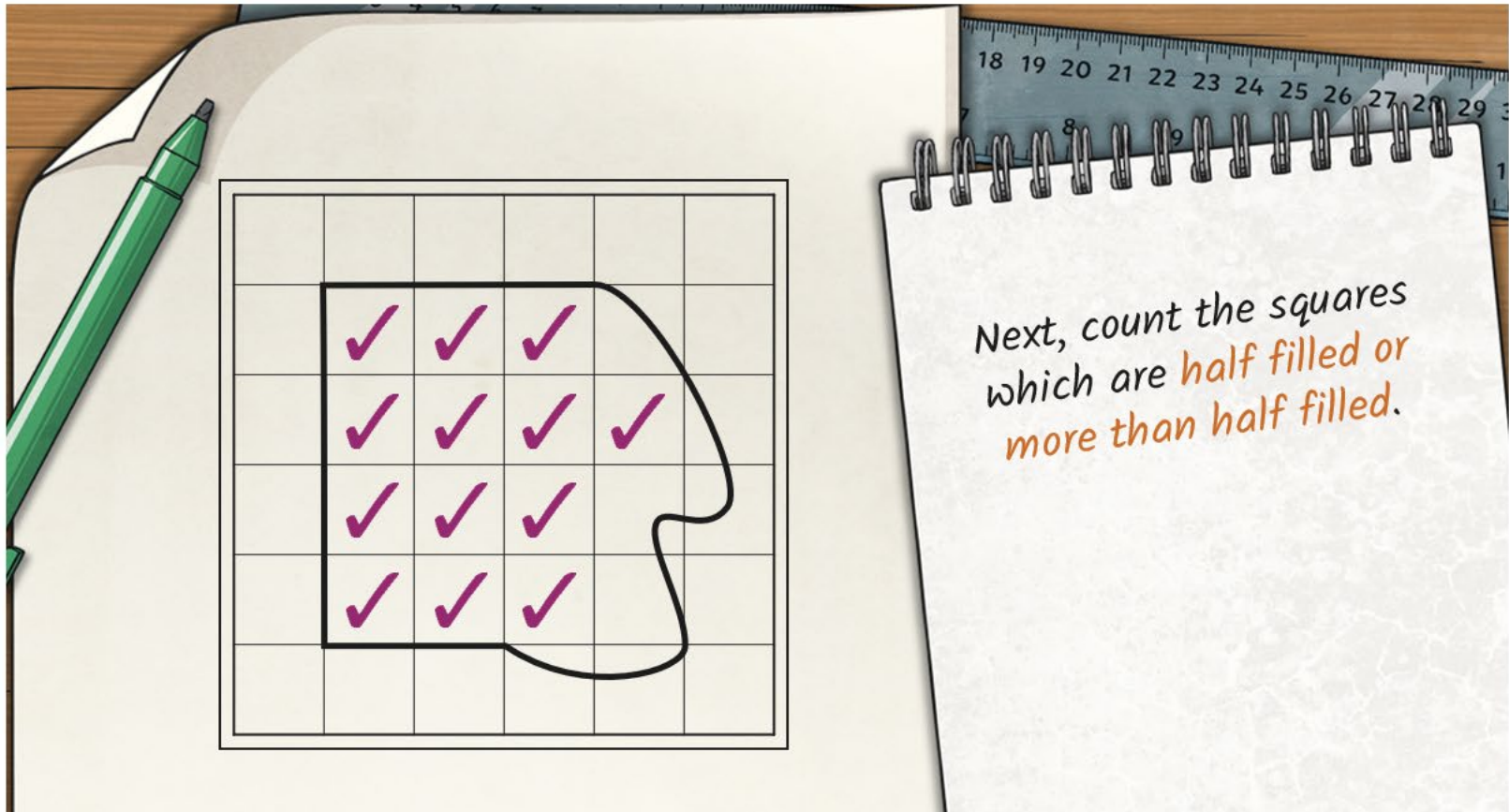


# Estimating the Area of Irregular Shapes



Here is another irregular shape.

We can estimate the area by counting squares in the same way.

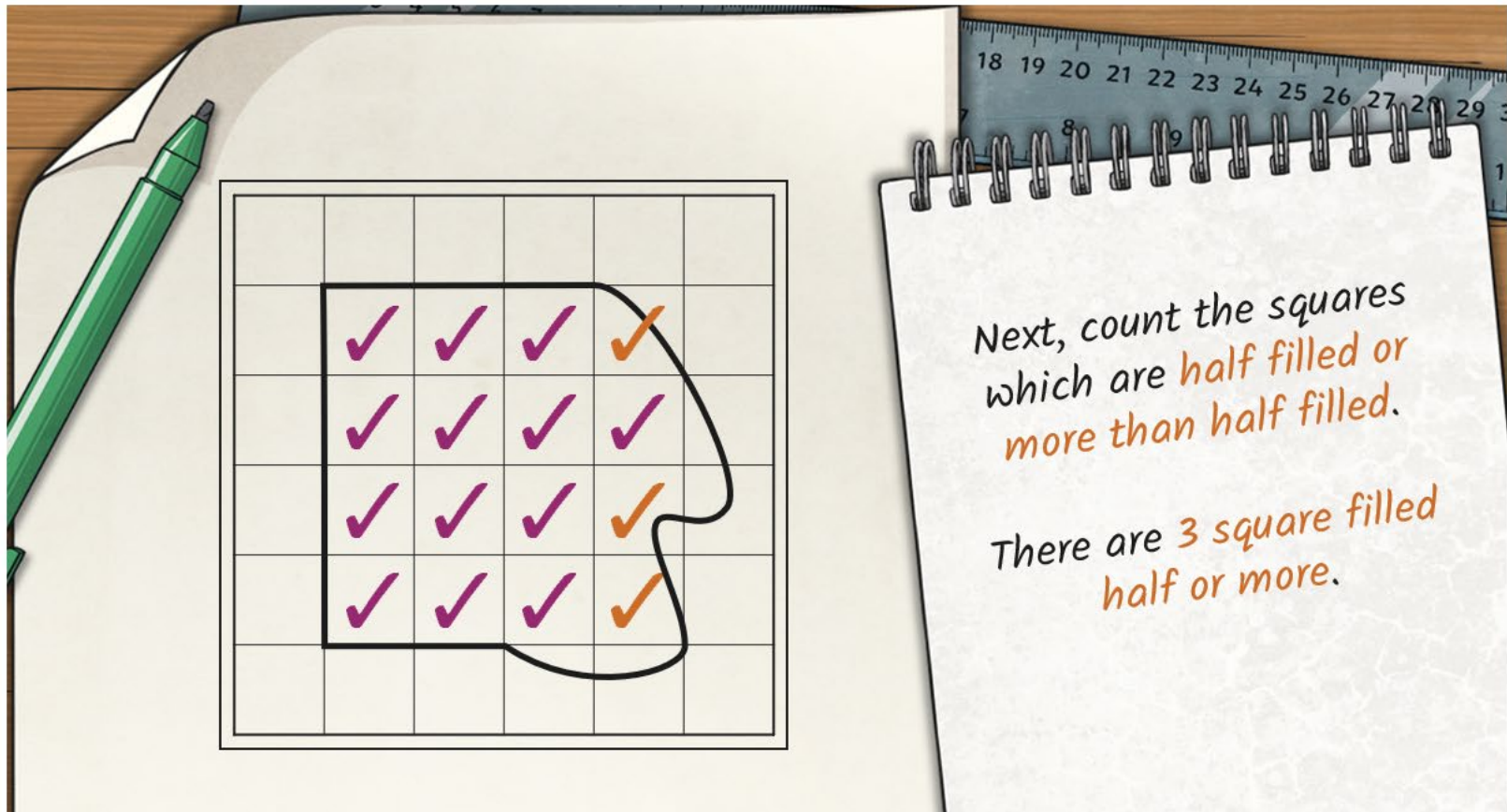




# Estimating the Area of Irregular Shapes



Here is another irregular shape.  
We can estimate the area by counting squares in the same way.



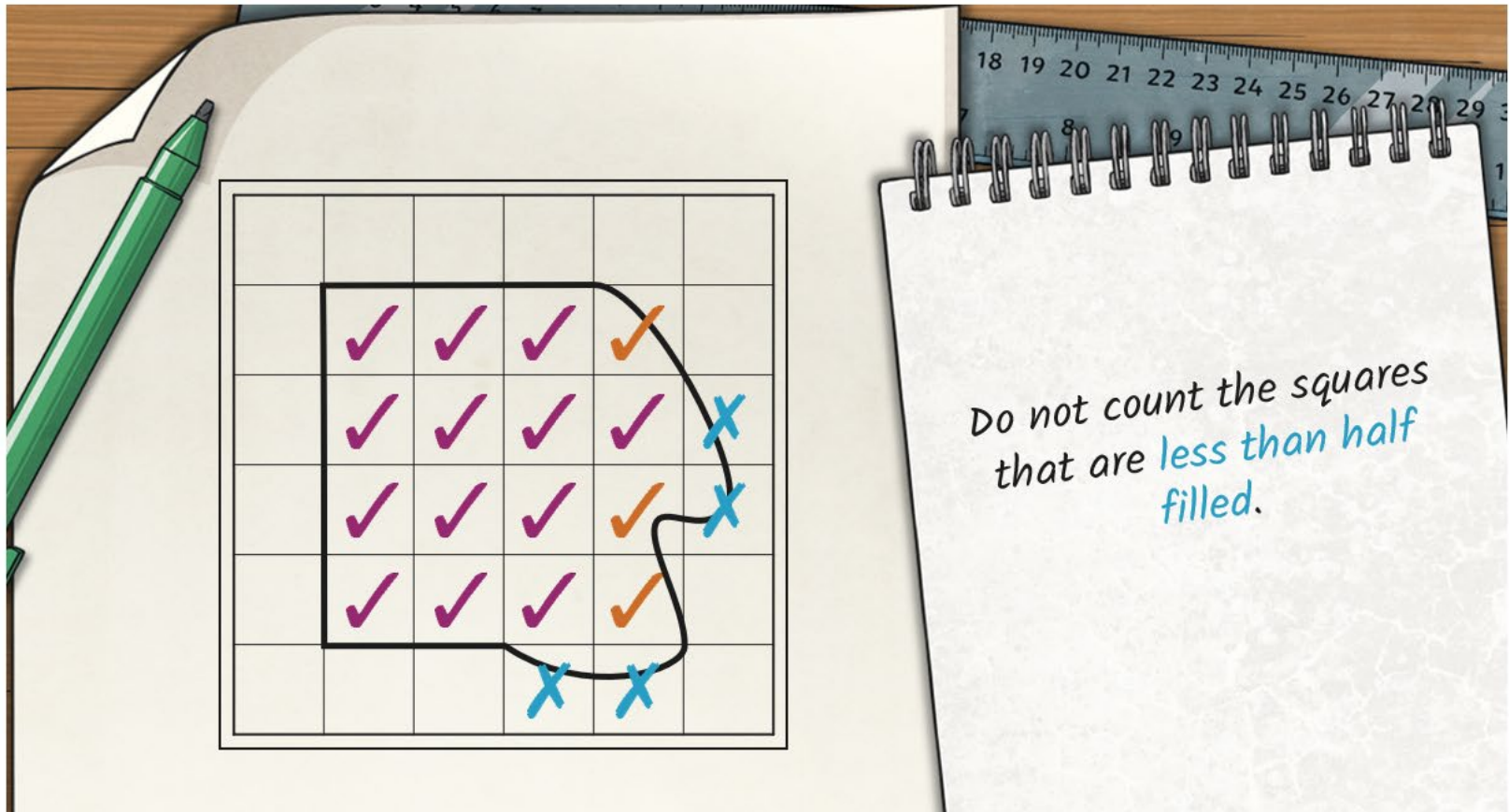


# Estimating the Area of Irregular Shapes



Here is another irregular shape.

We can estimate the area by counting squares in the same way.



# Estimating the Area of Irregular Shapes



Here is another irregular shape.

We can estimate the area by counting squares in the same way.

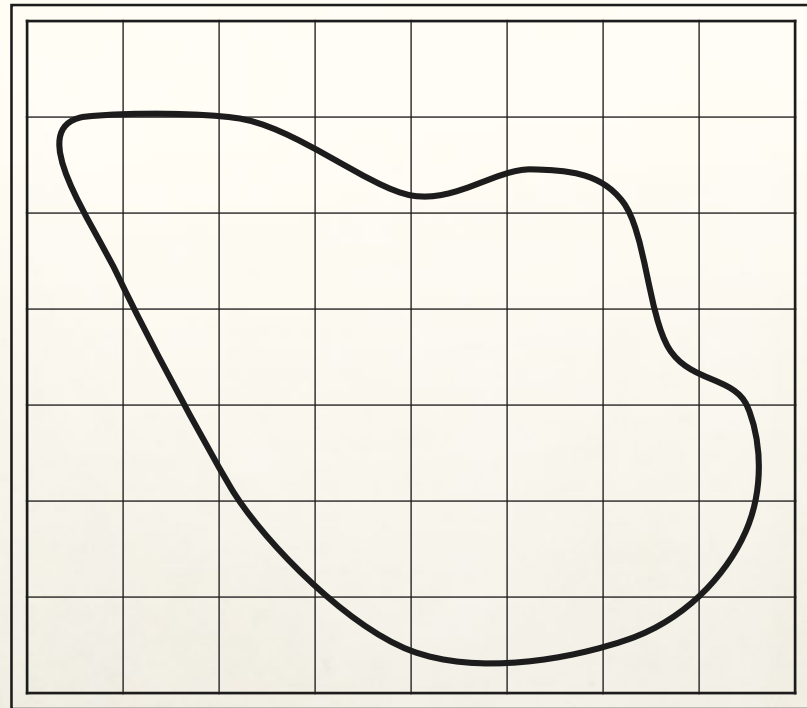


# Estimating the Area of Irregular Shapes



Here is an irregular shape without any straight edges at all.  
We can still estimate the area by counting squares!

*See if you can work out the area by following the steps you have used in the previous slides.*





# Estimating the Area of Irregular Shapes

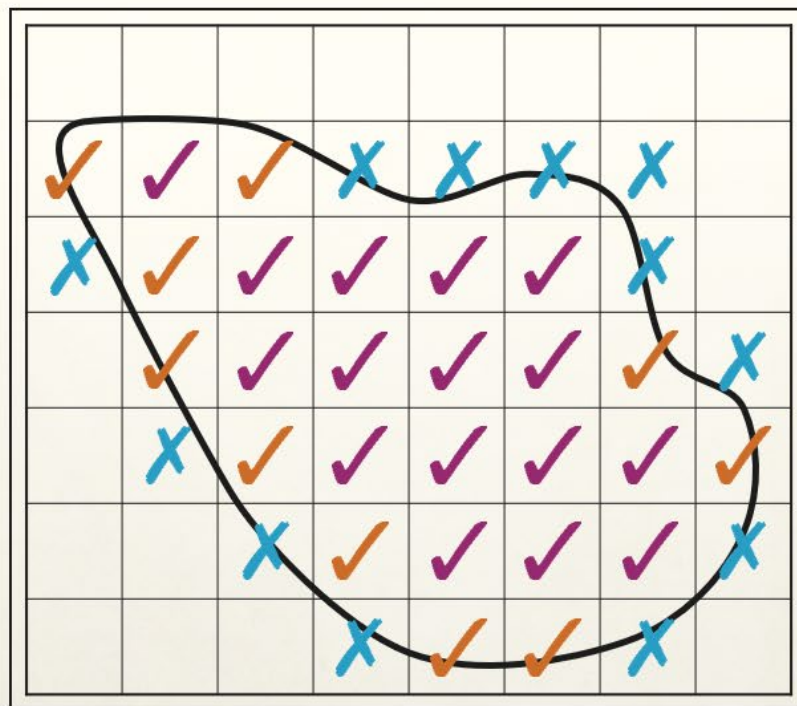


Here is an irregular shape without any straight edges at all.  
We can still estimate the area by counting squares!

Add the **whole squares** and **half filled squares** together:

$$16 + 10 = 26 \text{ squares}$$

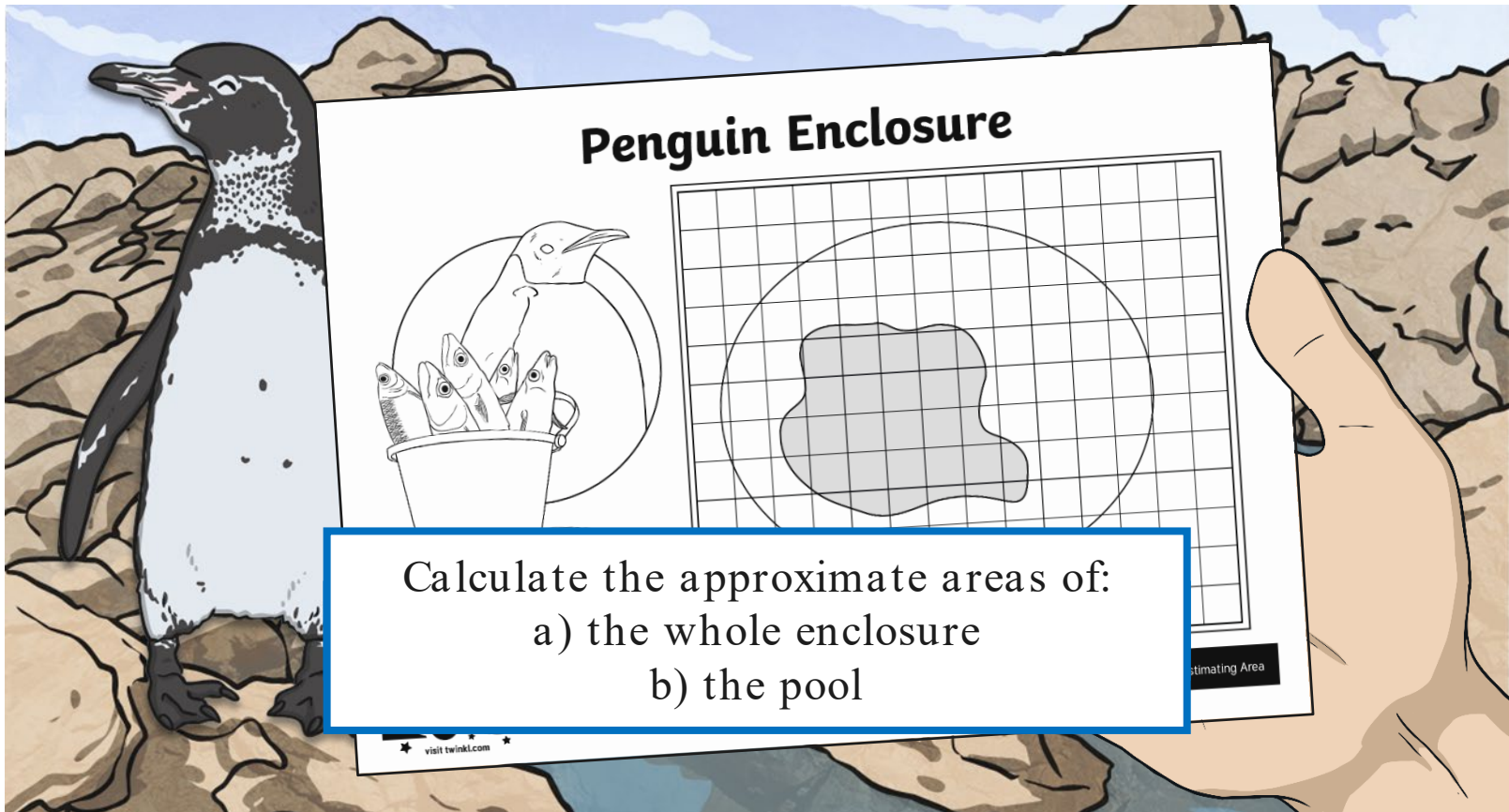
The area of this shape is approximately 26 squares.



# The Zoo



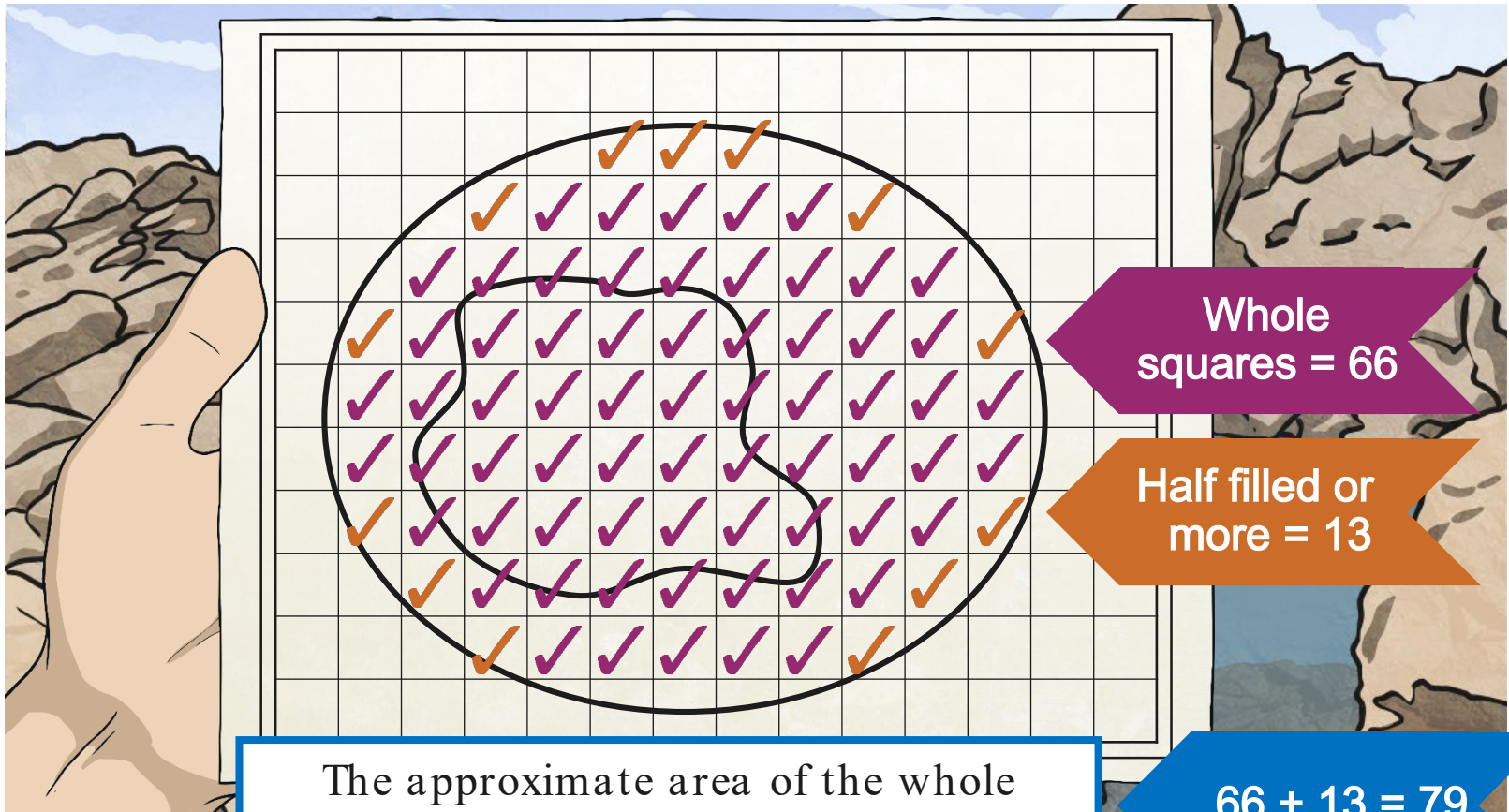
Look at your plan of the **Penguin Enclosure** at the Zoo.



# The Zoo



a) the whole enclosure



Whole  
squares = 66

Half filled or  
more = 13

The approximate area of the whole  
enclosure is  $79\text{m}^2$ .

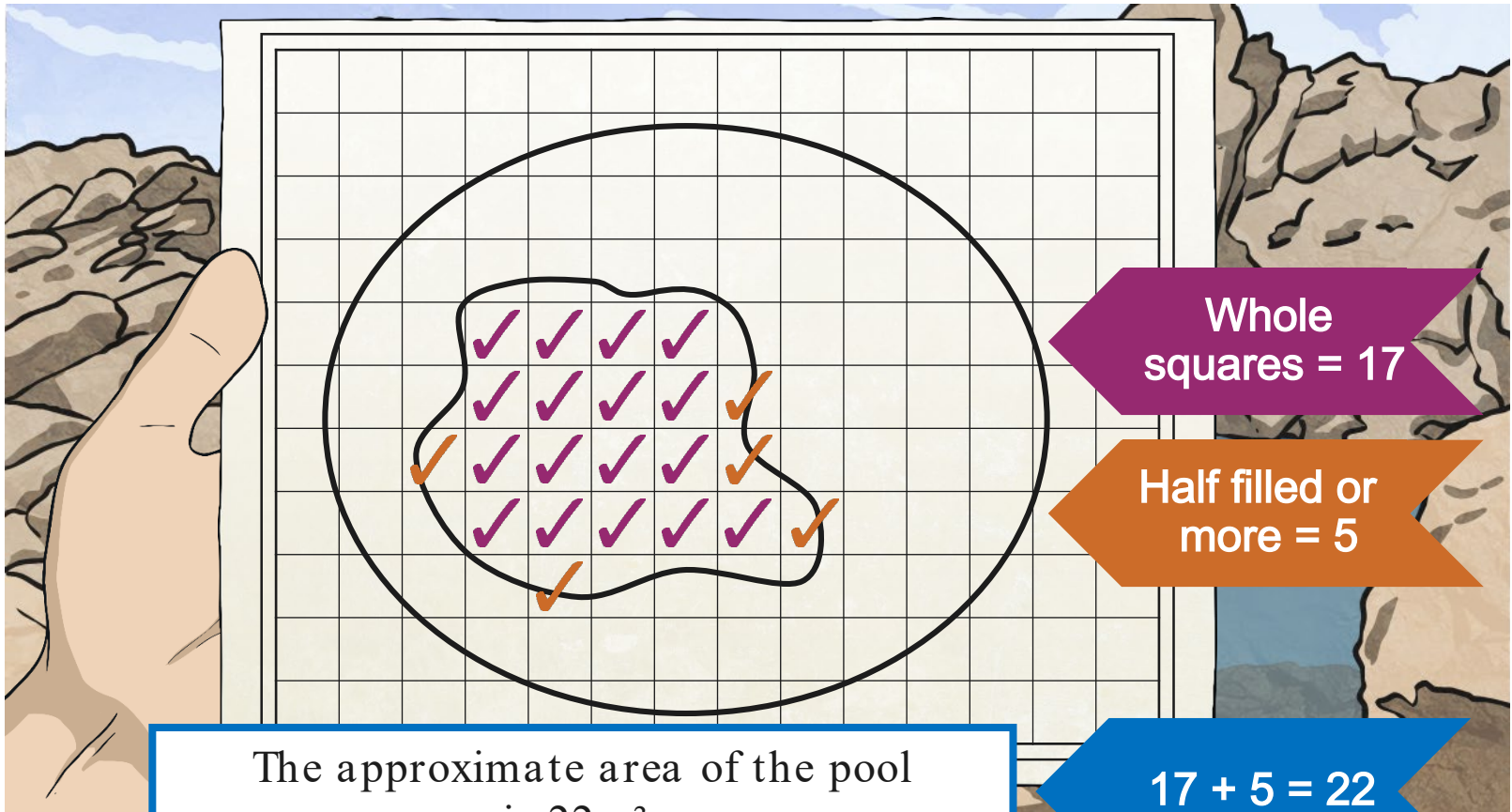
$$66 + 13 = 79$$



# The Zoo



b) the pool

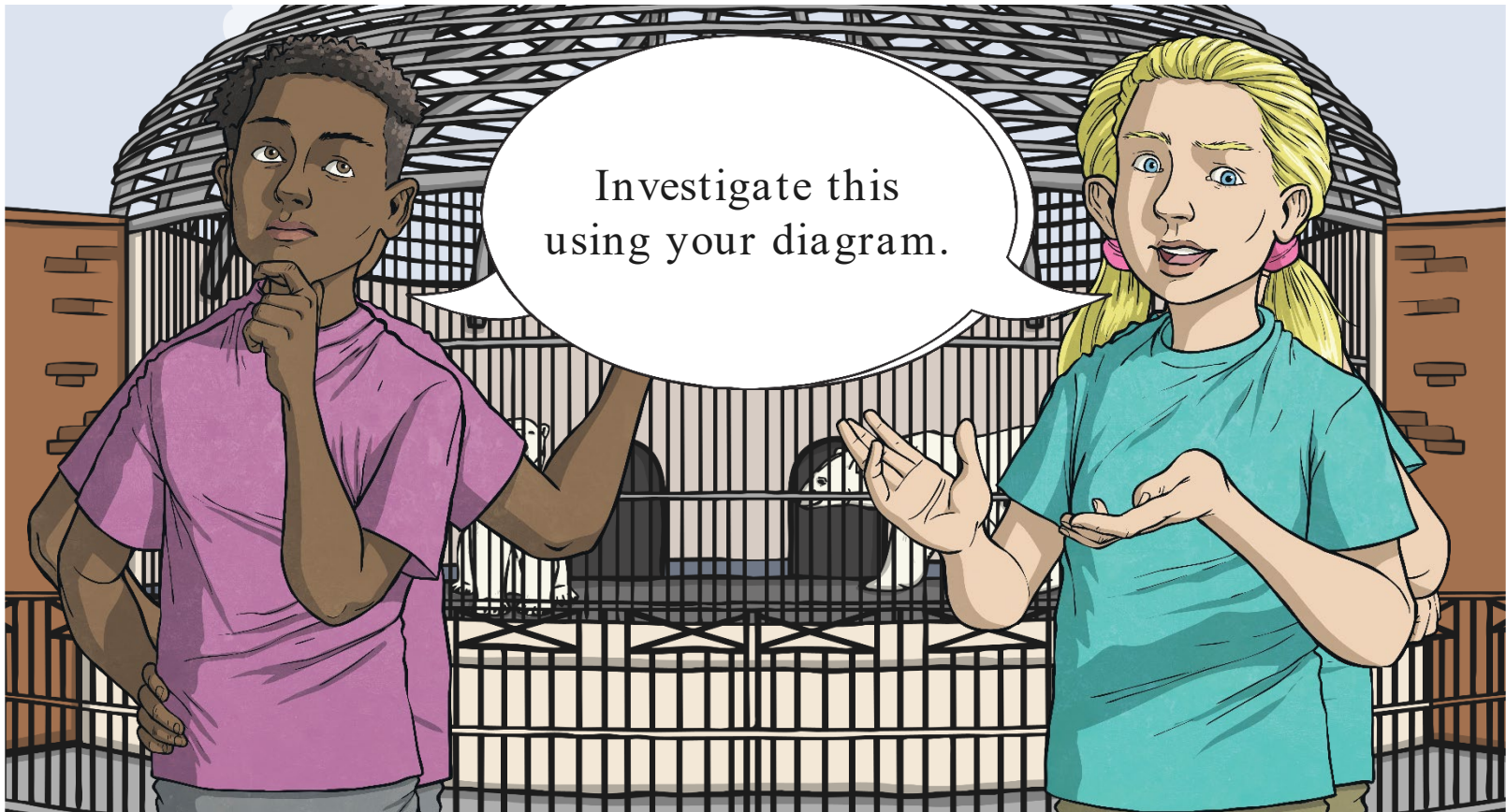


The approximate area of the pool is  $22\text{m}^2$ .

# The Zoo



How could you calculate the area of the land within the enclosure?





# The Zoo



How could you calculate the area of the land within the enclosure?

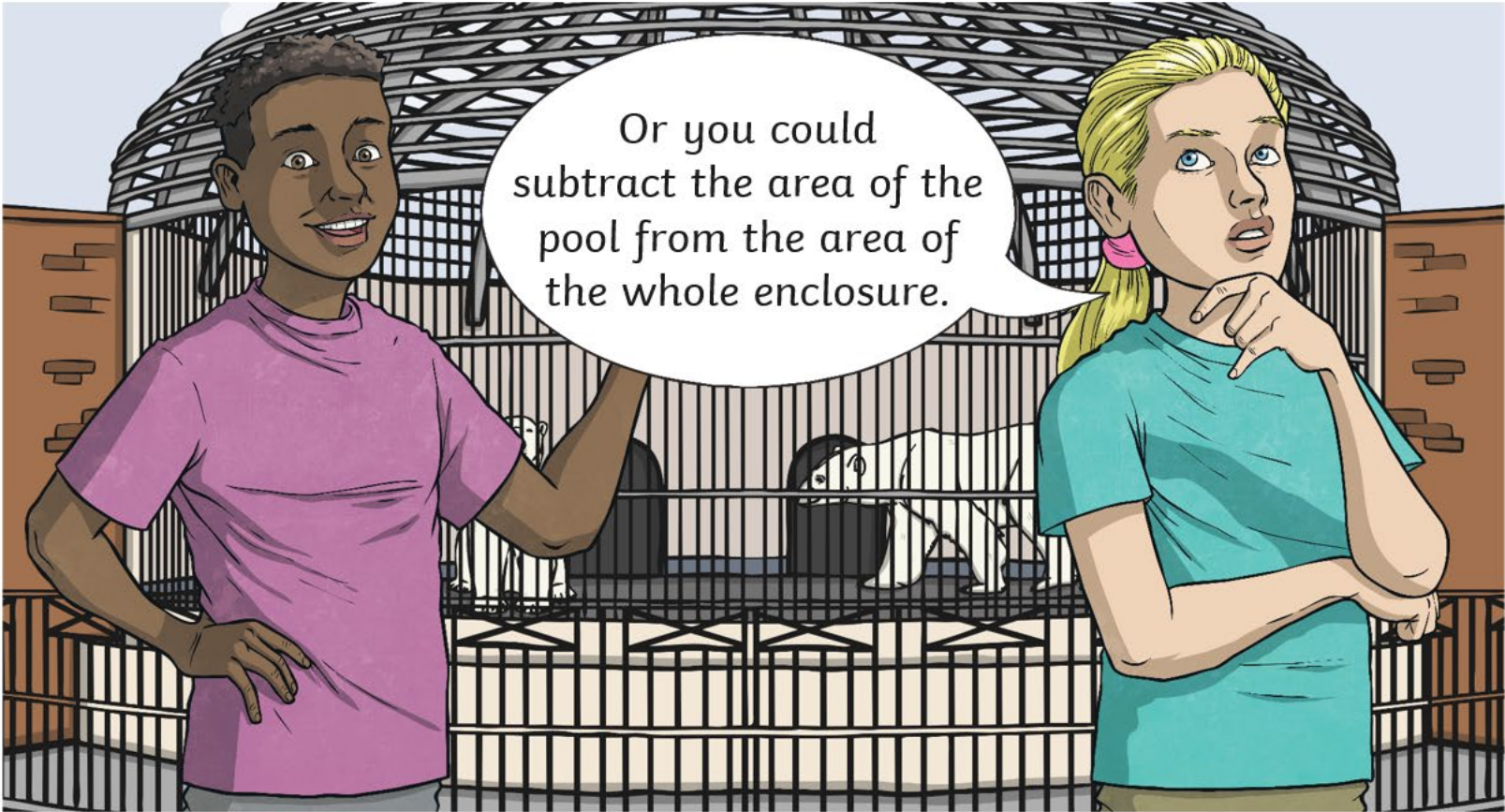




# The Zoo



How could you calculate the area of the land within the enclosure?

An illustration of two children standing in front of a large, circular zoo enclosure with a wire mesh fence. Inside the enclosure, a white animal, possibly a polar bear, is visible. The boy on the left is wearing a pink t-shirt and has his hand on his hip. The girl on the right is wearing a teal t-shirt and has her hand on her chin, looking thoughtful. A speech bubble from the boy contains the text: "Or you could subtract the area of the pool from the area of the whole enclosure."

Or you could subtract the area of the pool from the area of the whole enclosure.

# The Zoo



How could you calculate the area of the land within the enclosure?





# The Zoo



How could you calculate the area of the land within the enclosure?

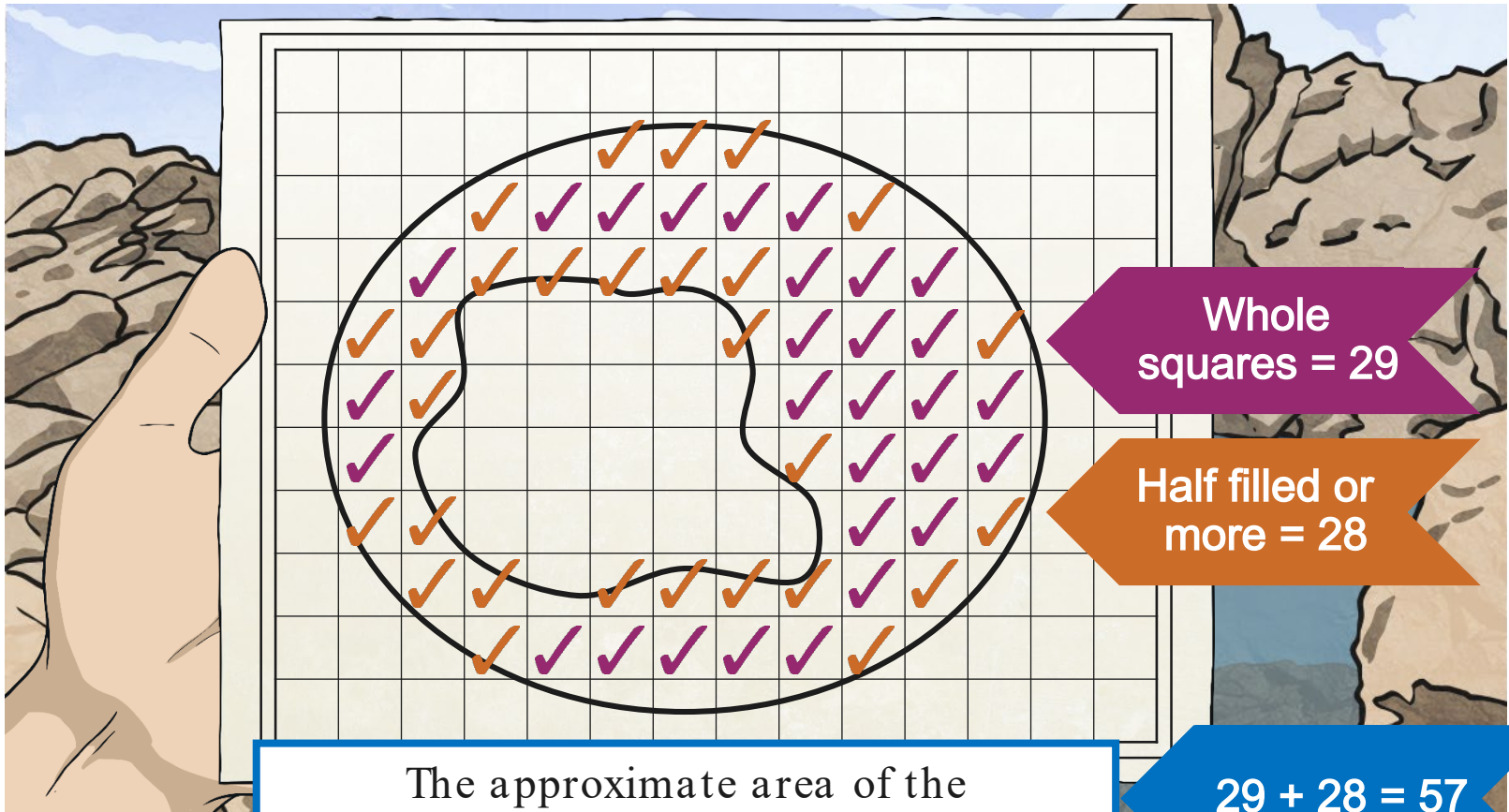




# The Zoo



If we count the squares and half filled or more squares of the non-water area:



The approximate area of the non-water area is  $57\text{m}^2$ .

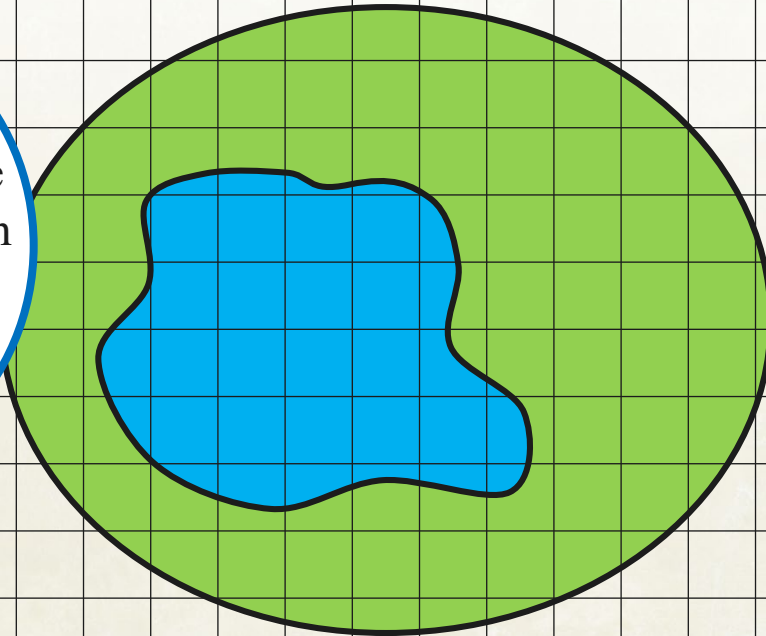
# The Zoo



If we subtract the area of the pool from the area of the whole enclosure:

?

Both calculations give the same answer, so both are good methods. Which did you find easiest?

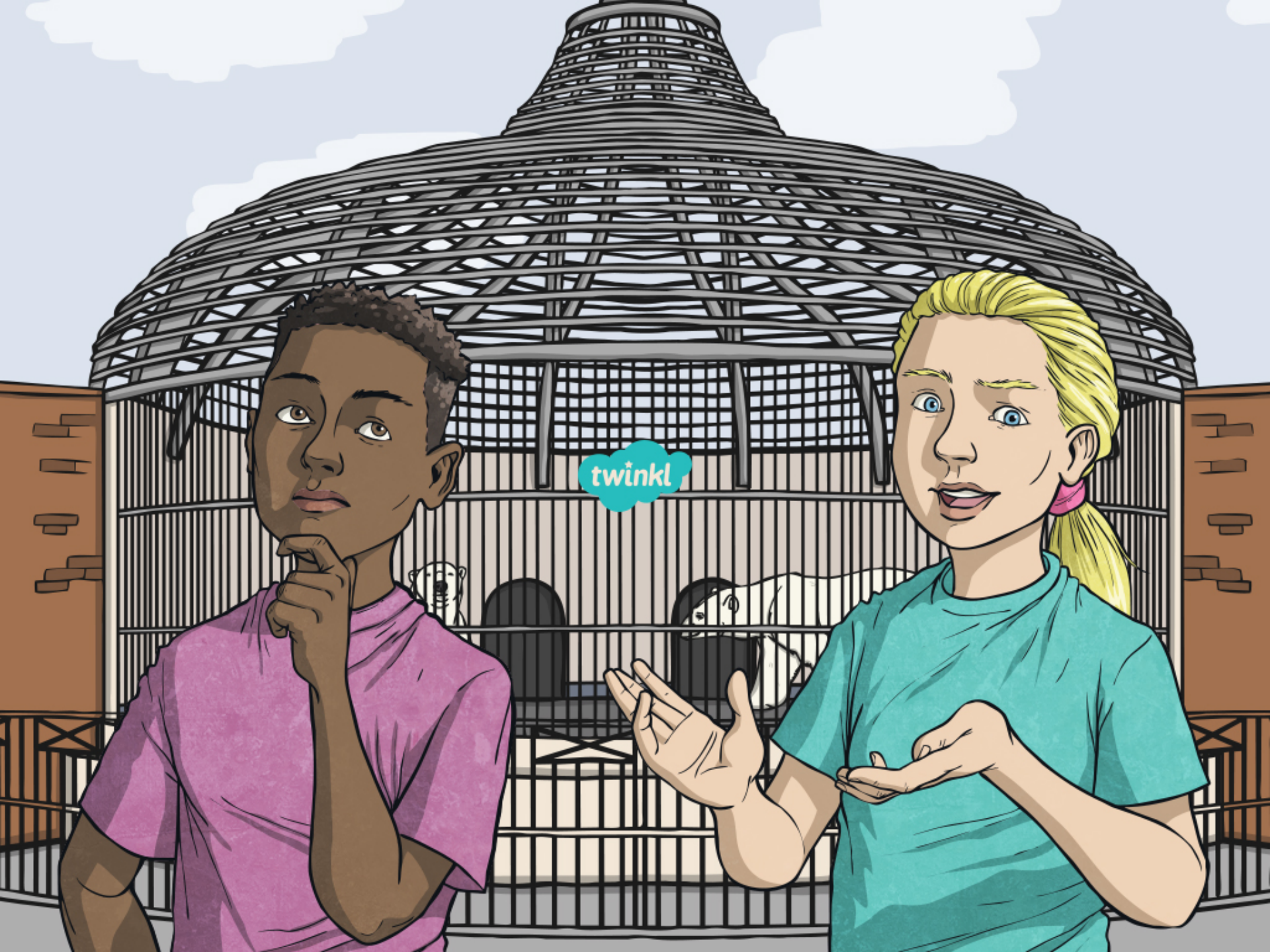


Whole enclosure =  $79\text{m}^2$

Pool =  $22\text{m}^2$

The approximate area of the non-water area is  $57\text{m}^2$ .

$79\text{m}^2 - 22\text{m}^2 = 57\text{m}^2$



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