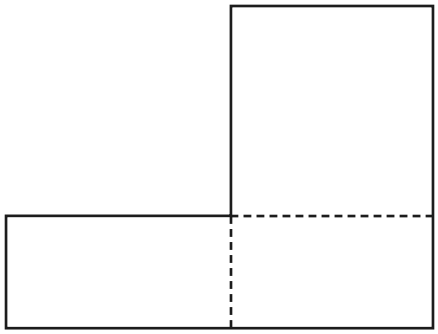
1) a) 96cm²

b) 23 625mm² or 236.25cm²

2) Lines drawn as shown:



1) Answers will vary.

2) No. She could find the area of the whole rectangle, then subtract the area of the 'missing' piece or pieces.

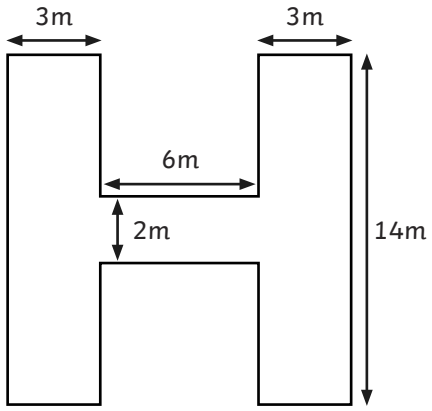
1) a) Yes. Children should demonstrate that the shape cannot be split into rectangles where every side length is known.

b) By splitting the shape into 4 rectangles, children should find that only 2 more measurements are needed in order to make finding the area possible.

c) To make an area of 107cm², the sides could measure (clockwise from top right) 10cm, 6cm, 3cm, 6cm, 4cm, 9cm, 10cm, 4cm, 7cm and 5cm.

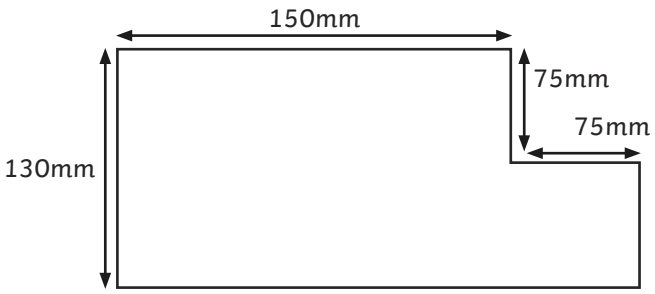
1) Find the area of the following shapes.

a)



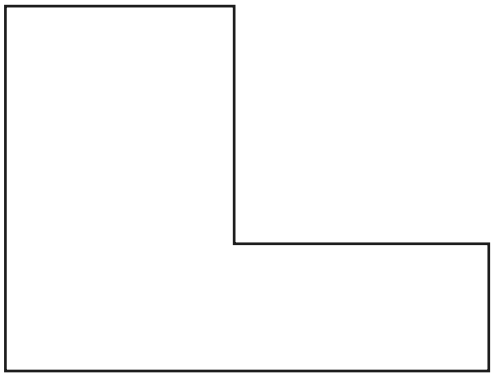
area = _____

b)



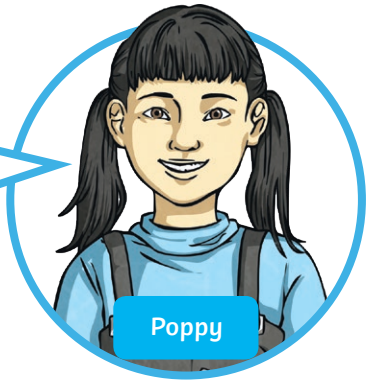
area = _____

2) Use a ruler to draw on the ways you could split this shape to work out its area.



1) Draw 3 different compound shapes, each with an area of 45cm^2.

2)



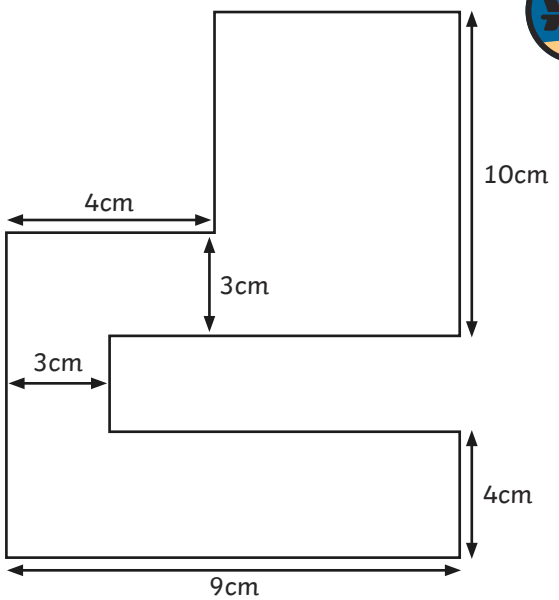
Do you agree with her?
Explain your answer:

_____

_____

_____

1) Ianto wants to calculate the area of this shape.



a) He says, "It is impossible to work out the area of this shape without more measurements." Is he right?

_____

Prove it!

_____

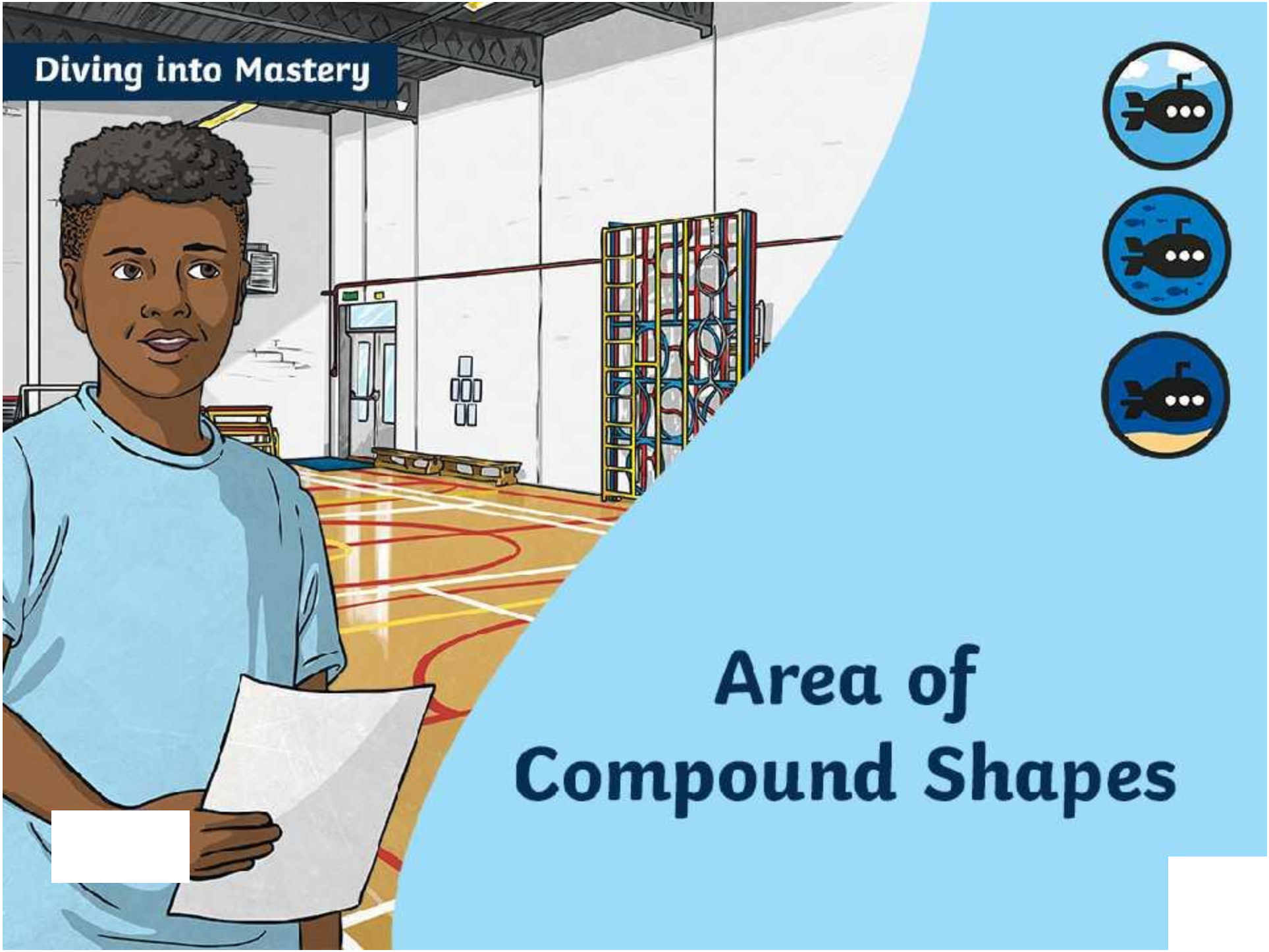
_____

b) Investigate how many more measurements Ianto needs in order to find the area.

_____

c) If the total area is 107cm^2, what could the missing lengths be?

_____



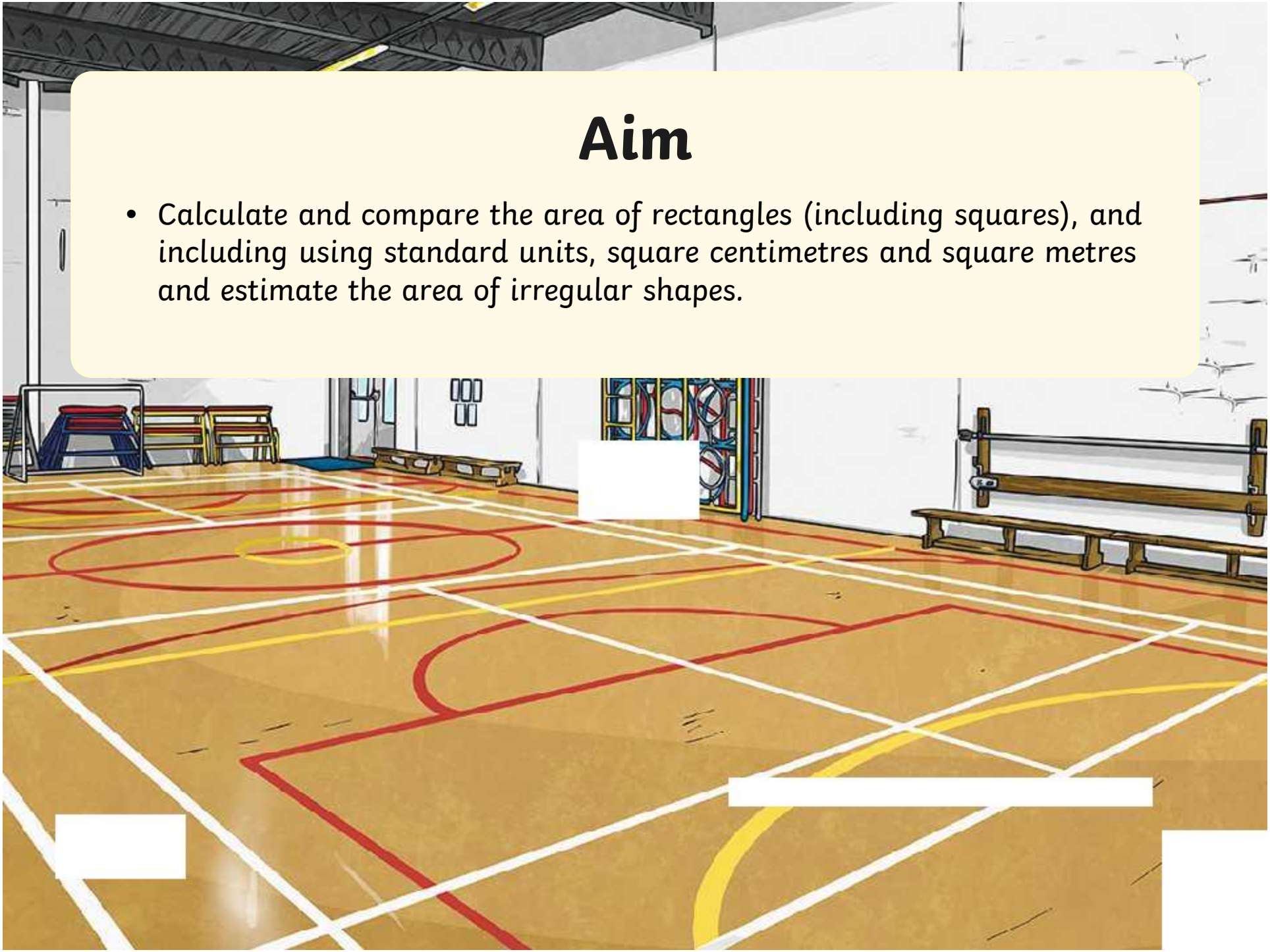
Area of Compound Shapes

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

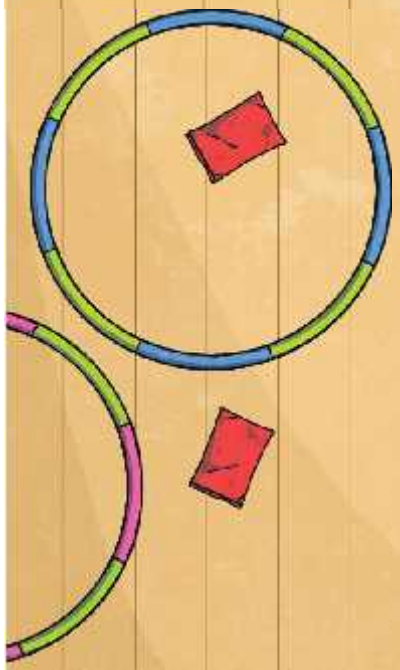


Aim

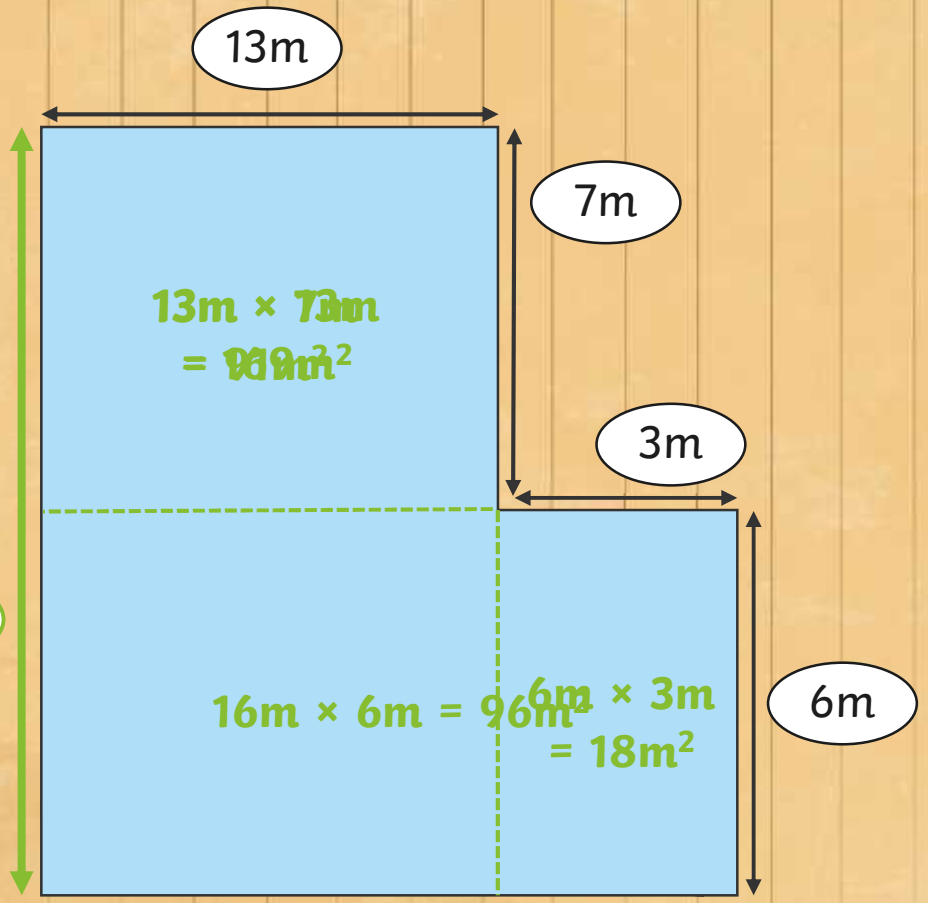
- Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres and square metres and estimate the area of irregular shapes.

Area of Compound Shapes

Diving



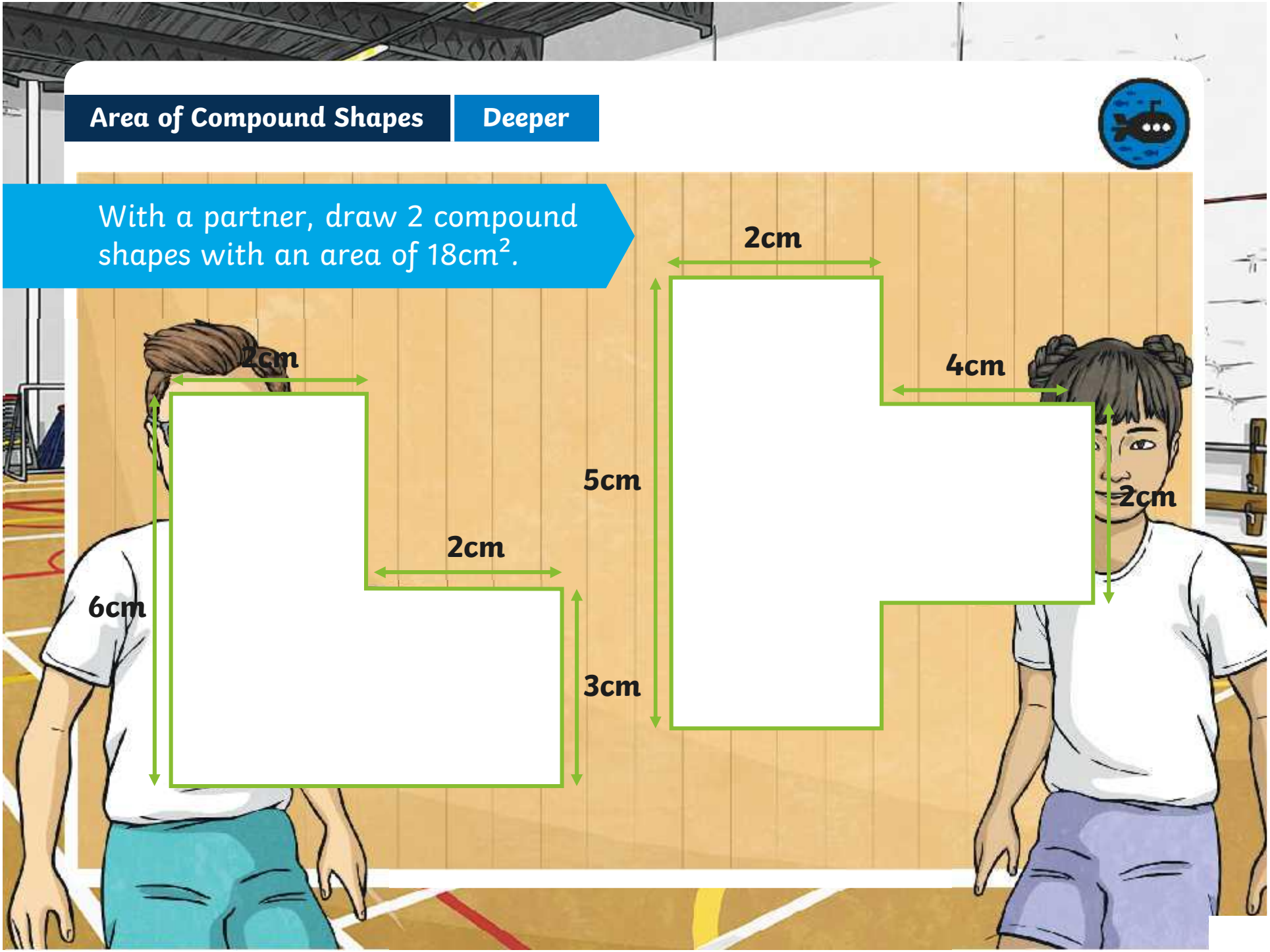
187m²



Is there another way you could split this shape to work out its area?

Area of Compound Shapes | **Deeper**

With a partner, draw 2 compound shapes with an area of $18cm^2$.

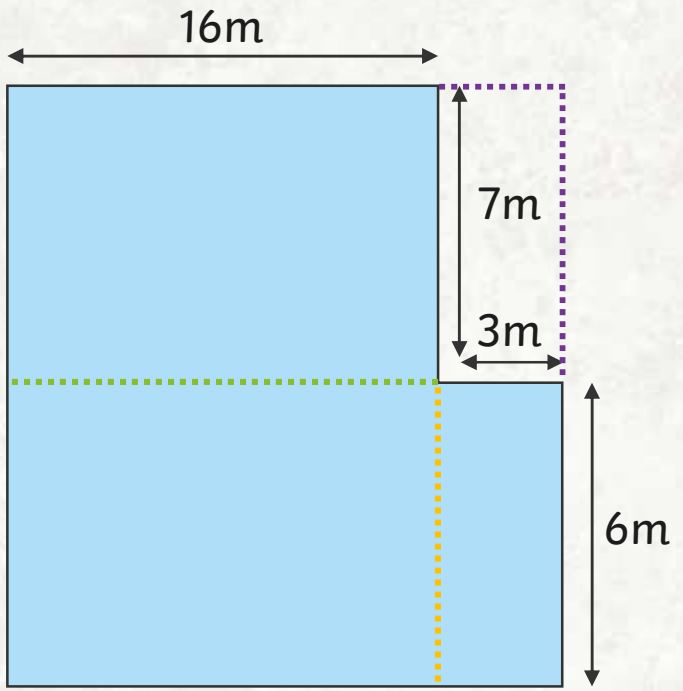


Area of Compound Shapes | Deeper

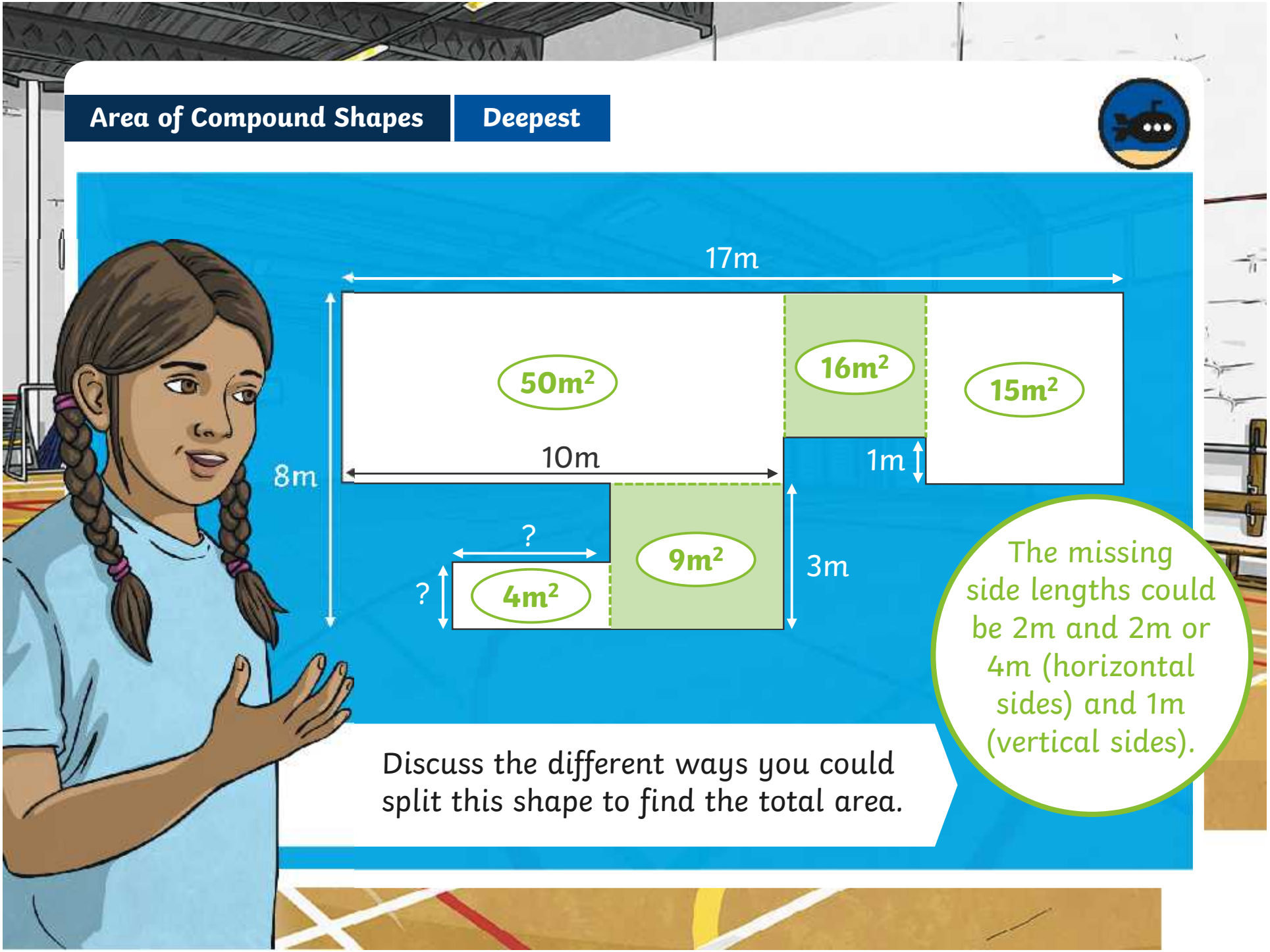
I could cut this shape into two rectangles, using either the green or the yellow dotted line.

Discuss with a partner how the purple dotted lines could also help you find the area.

19m × 13m = **247m²**
7m × 3m = **21m²**
247m² – 21m² = **226m²**



Area of Compound Shapes | Deepest

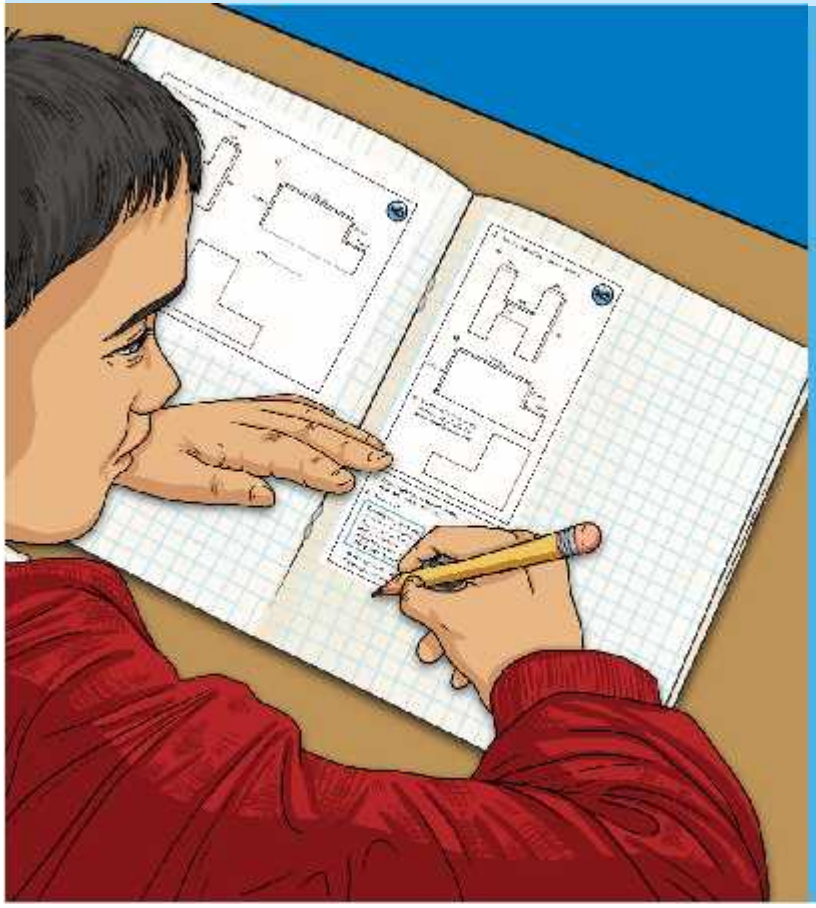


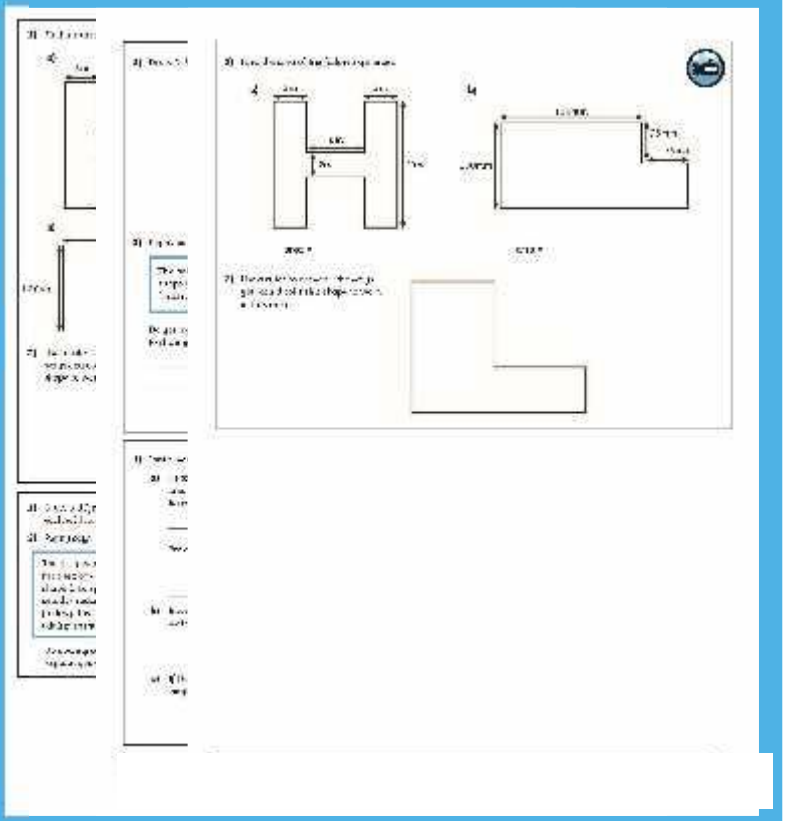
Discuss the different ways you could split this shape to find the total area.

The missing side lengths could be 2m and 2m or 4m (horizontal sides) and 1m (vertical sides).

Area of Compound Shapes

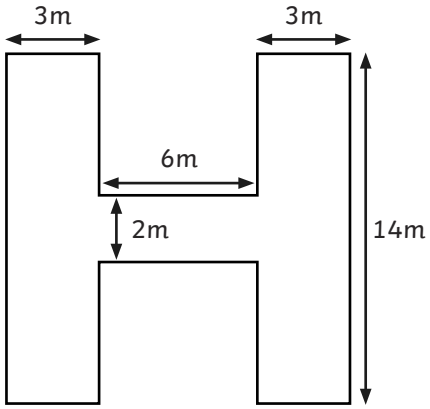
Dive in by completing your own activity!



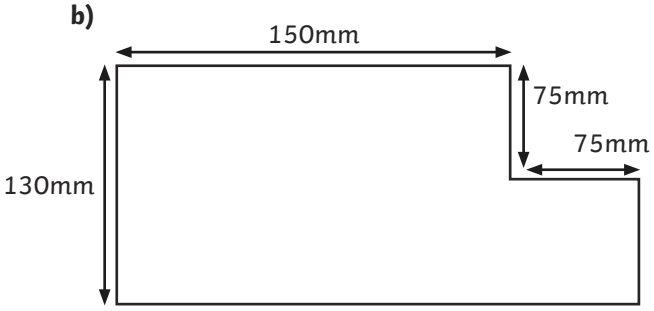


1) Find the area of the following shapes.

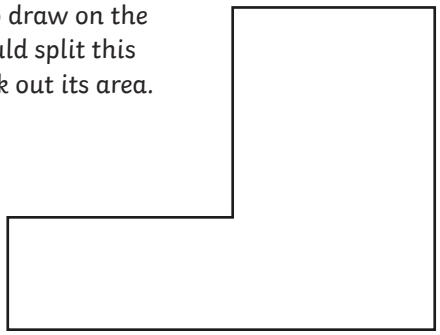
a)



b)

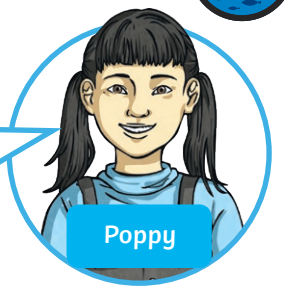


2) Use a ruler to draw on the ways you could split this shape to work out its area.



1) Draw 3 different compound shapes, each with an area of 45cm^2.

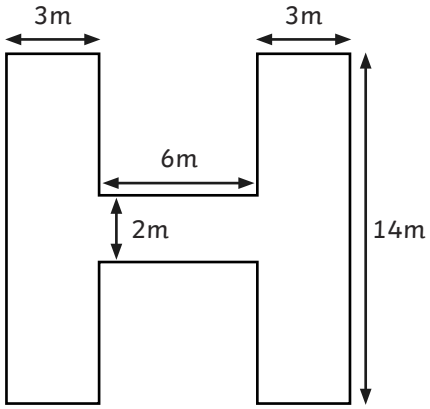
2)



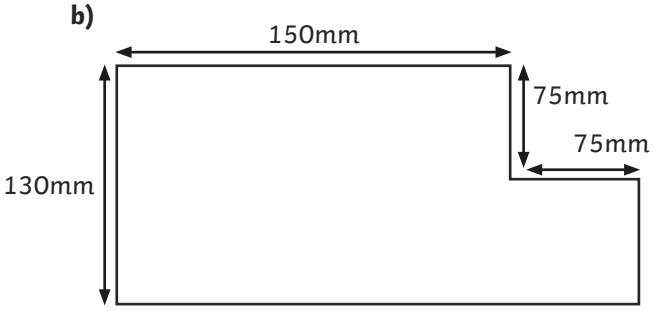
Do you agree with her?
Explain your answer.

1) Find the area of the following shapes.

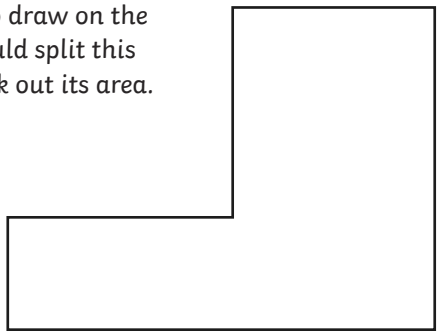
a)



b)



2) Use a ruler to draw on the ways you could split this shape to work out its area.



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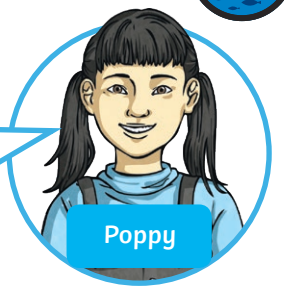
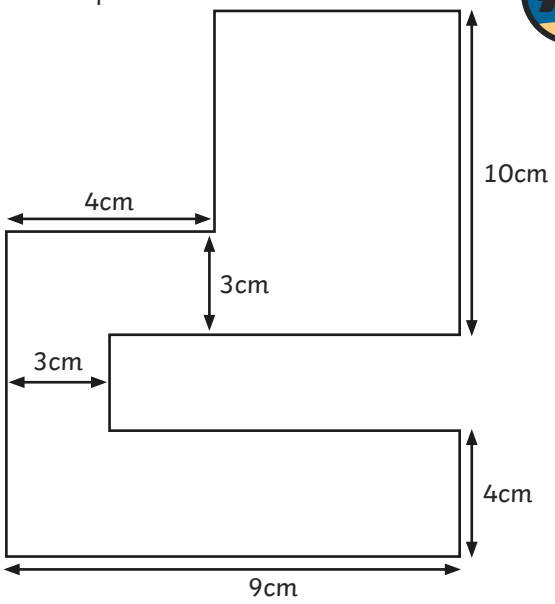
2)



Do you agree with her?
Explain your answer.

1) Ianto wants to calculate the area of this shape.



a) He says,
"It is impossible to work out the area of this shape without more measurements."

Is he right? Prove it!

b) Investigate how many more measurements Ianto needs in order to find the area.

c) If the total area is $107cm^2$, what could the missing lengths be?

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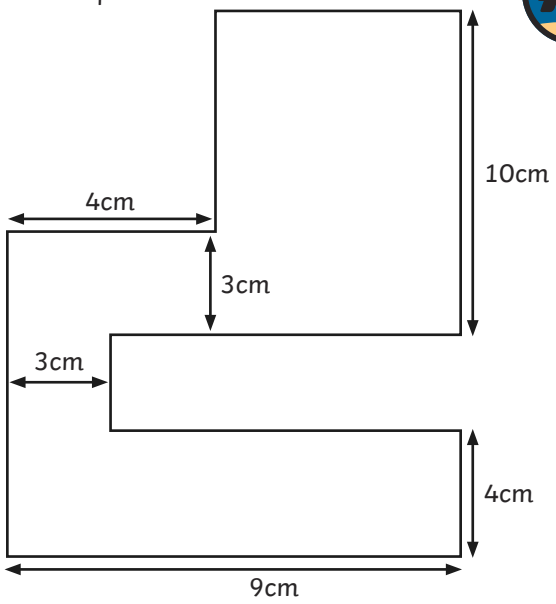

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