

Mathematics

Further triangles

Lesson 8 of 8

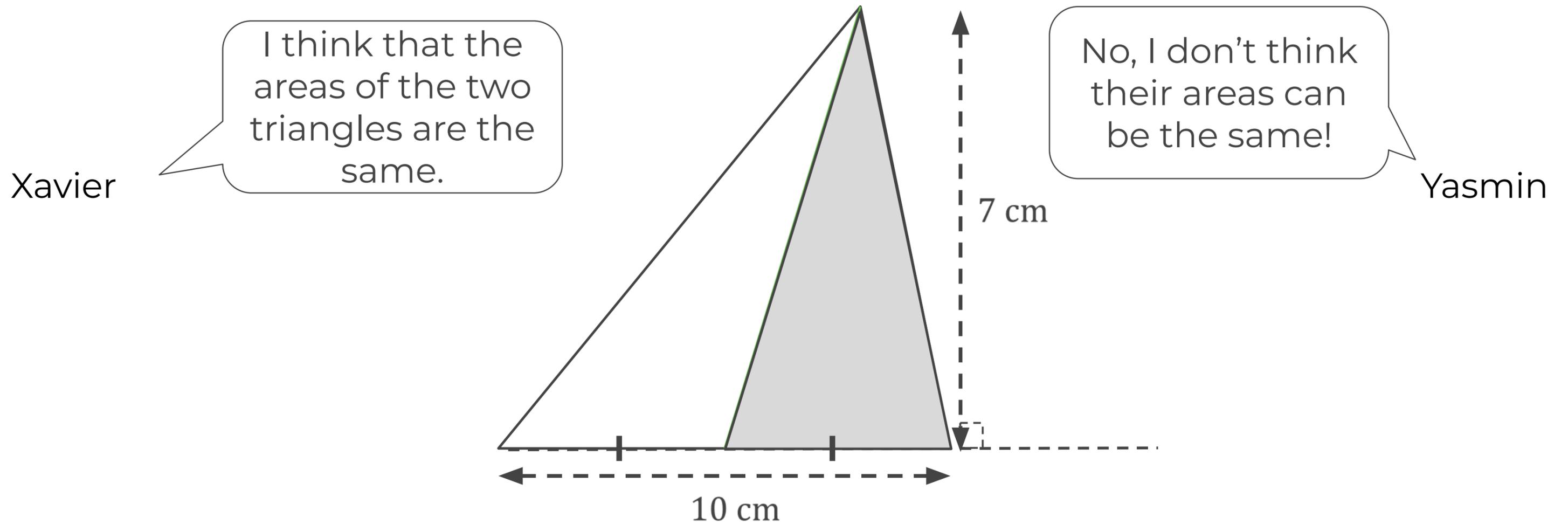
Miss Kidd-Rossiter



Try this

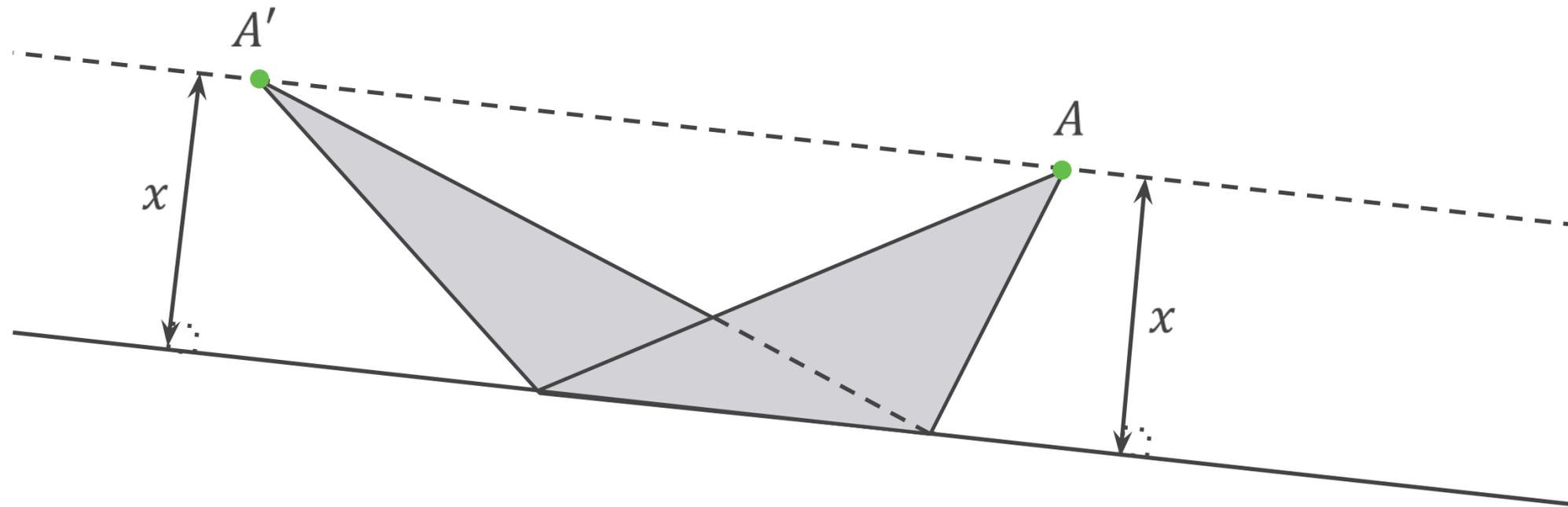
Xavier and Yasmin are finding the area of the nested triangles below.

Who do you agree with? Explain your answer.



Connect

Two parallel lines are used to construct two triangles.



What's the same and what's different about the two triangles?

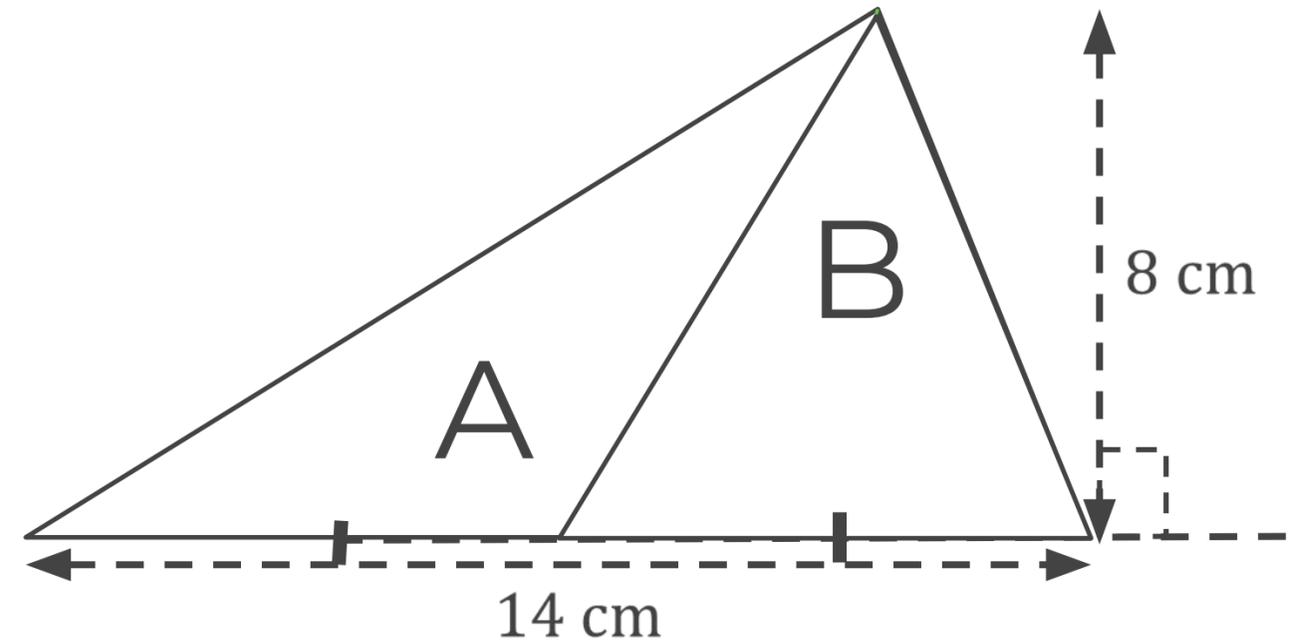
Explain why the areas of the triangles are equal.

Imagine sliding point A along the dashed line to a point you can no longer see. Is the area of this triangle the same?



Independent task

1. Work out the area of triangles A and B in this diagram.



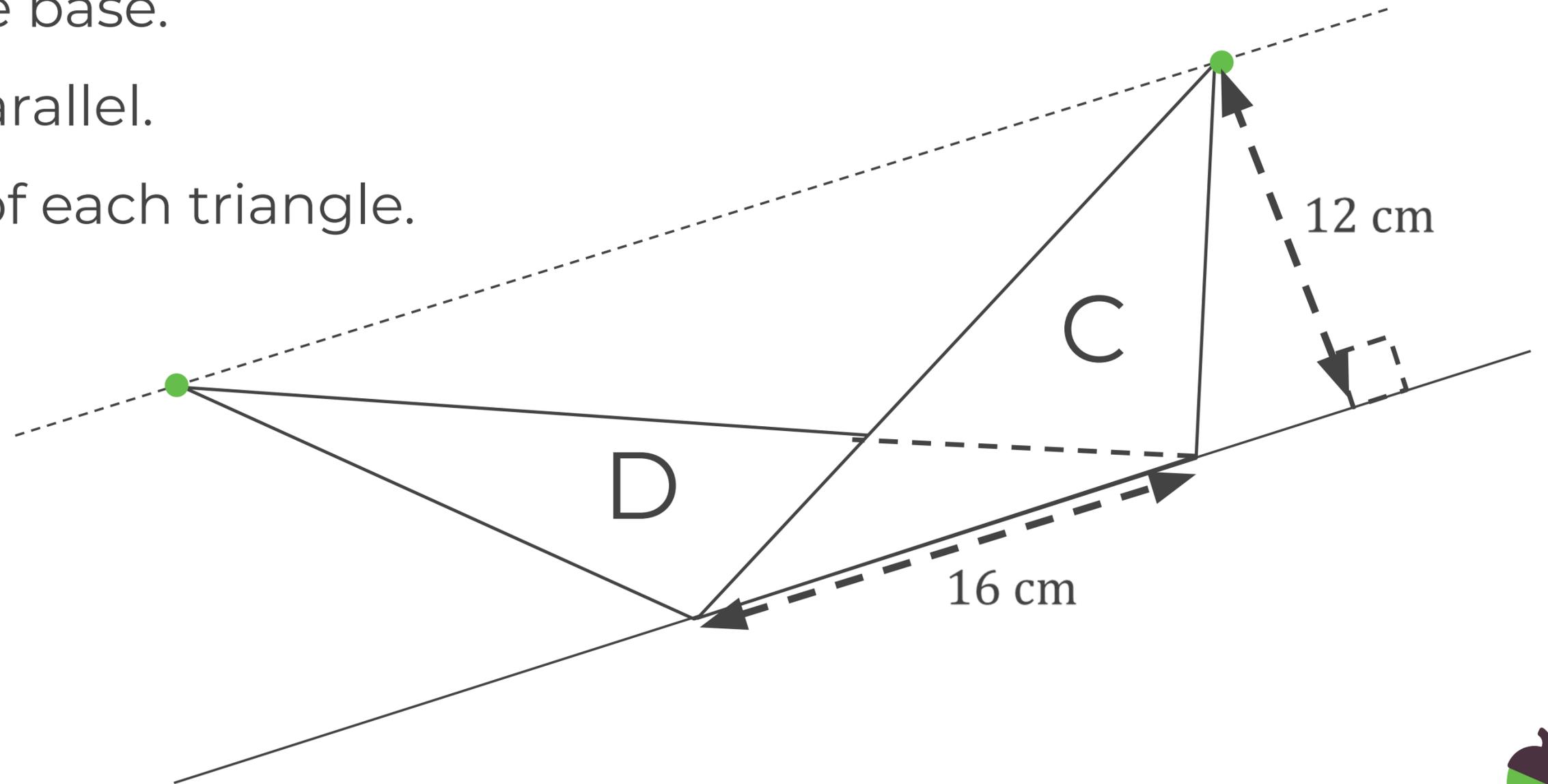
Independent task

2. Triangle C is partly on top of triangle D.

They have the same base.

The two lines are parallel.

Work out the area of each triangle.

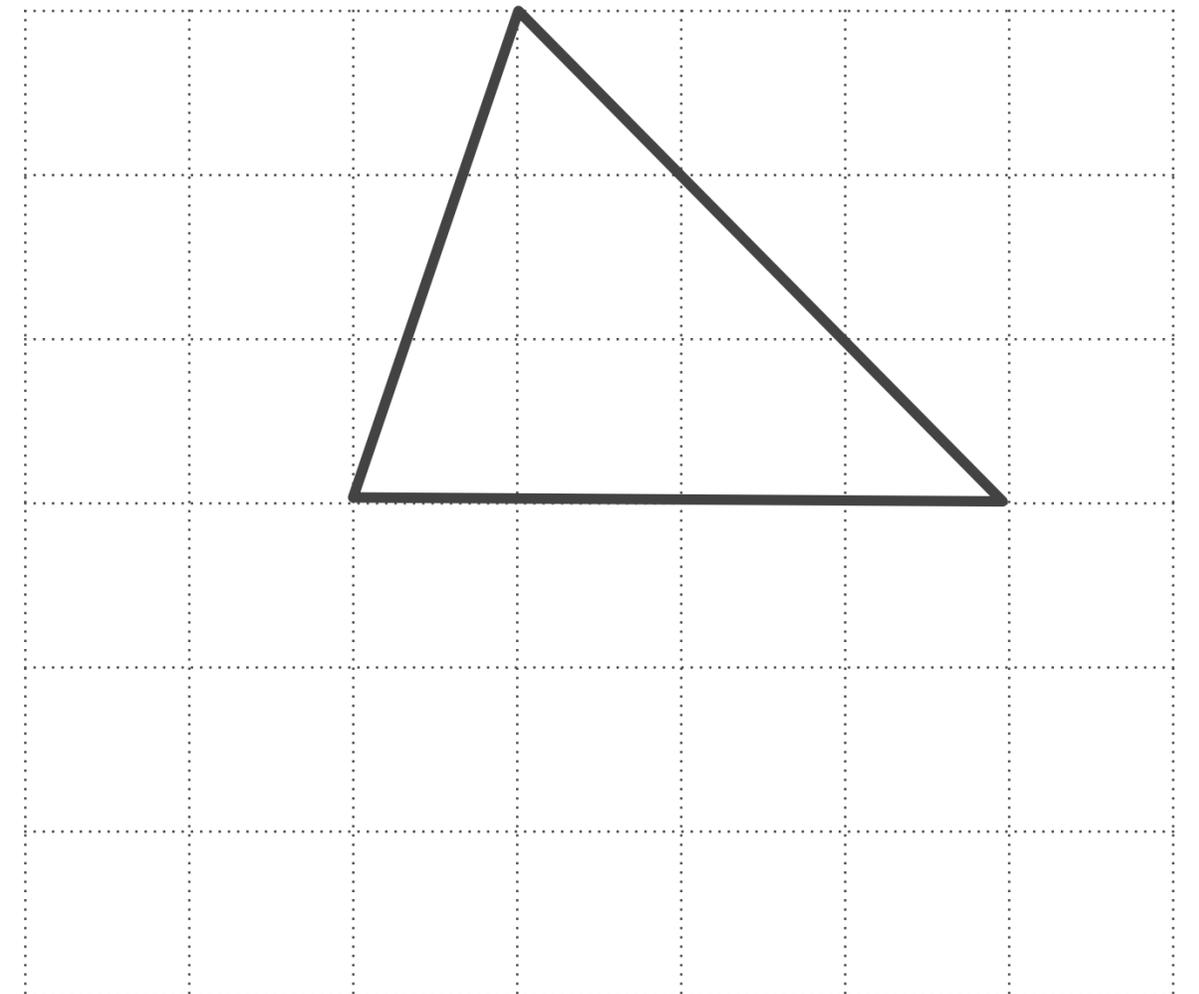


Independent task

3. Work out the area of the triangle.

Draw a different triangle with the same base as this triangle but:

- a. the same area;
- b. a larger perimeter;
- c. a smaller area.



Explore

Are these statements **always** true, **sometimes** true or **never** true?

Can you draw some examples for each?

For any triangle there is another with the same area but with a greater perimeter.

For any triangle there is another with the same perimeter but with a smaller area.

