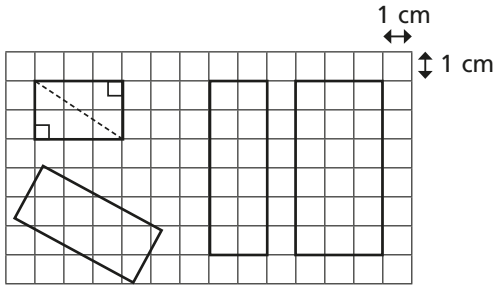
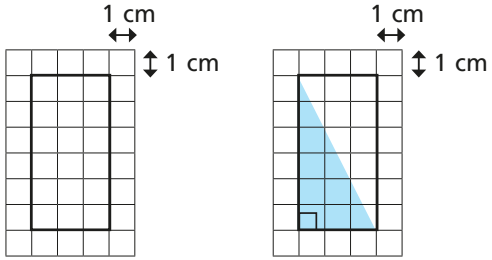
Area of a triangle (2)

1 Divide each rectangle into two right-angled triangles.
The first one has been done for you.

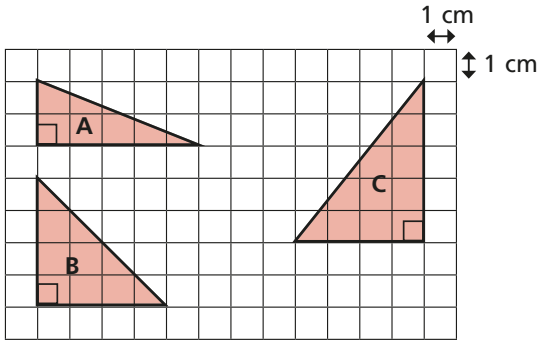


2 **a)** Calculate the area of the rectangle and the triangle.



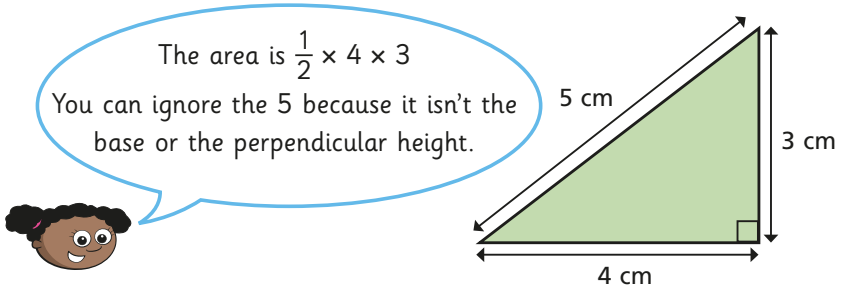
b) Explain how you worked out the area of the right-angled triangle.

3 Calculate the areas of the right-angled triangles.



4 Whitney is calculating the area of the triangle using the formula.

Area = $\frac{1}{2}$ × base × perpendicular height

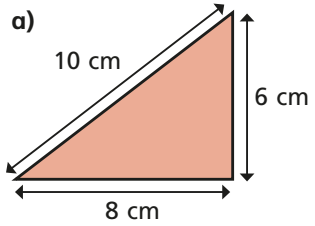


Do you agree with Whitney? Talk about it with a partner.

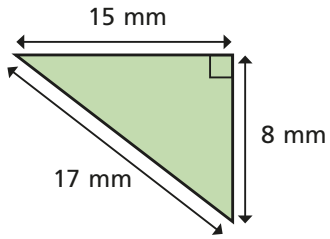
5 Insert the correct numbers into the formula to calculate the area of the triangle. Give units with your answer.

$\frac{1}{2}$ × ☐ × ☐ = ☐

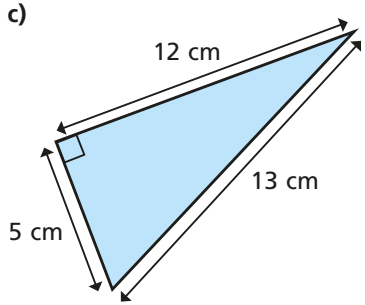
a)



b)



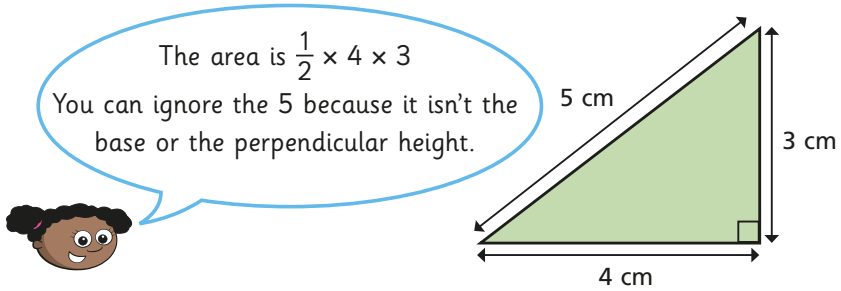
c)



Area of a triangle (2)

4 Whitney is calculating the area of the triangle using the formula.

Area = $\frac{1}{2}$ × base × perpendicular height

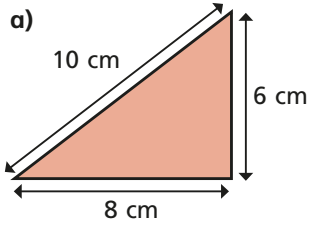


Do you agree with Whitney? Talk about it with a partner.

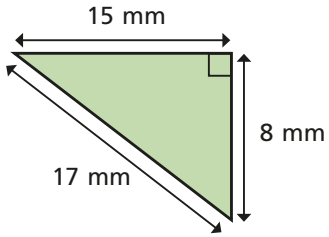
5 Insert the correct numbers into the formula to calculate the area of the triangle. Give units with your answer.

$\frac{1}{2}$ × ☐ × ☐ = ☐

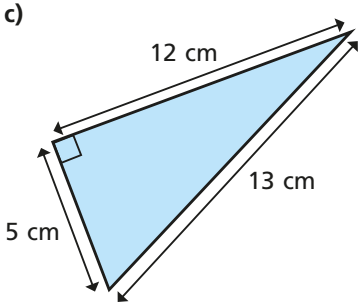
a)



b)

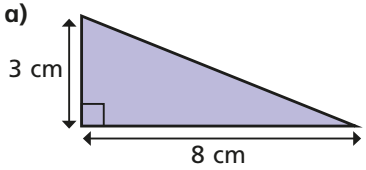


c)

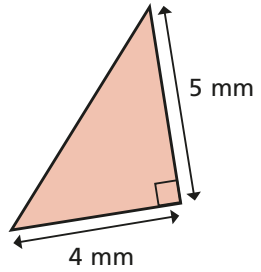


6 Calculate the areas of the triangles.

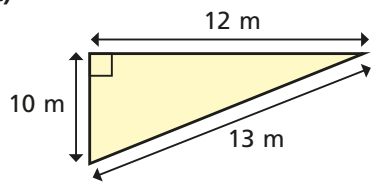
a)



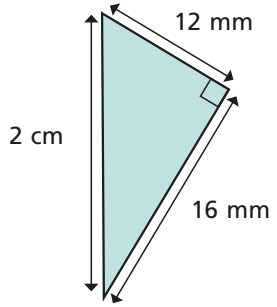
b)



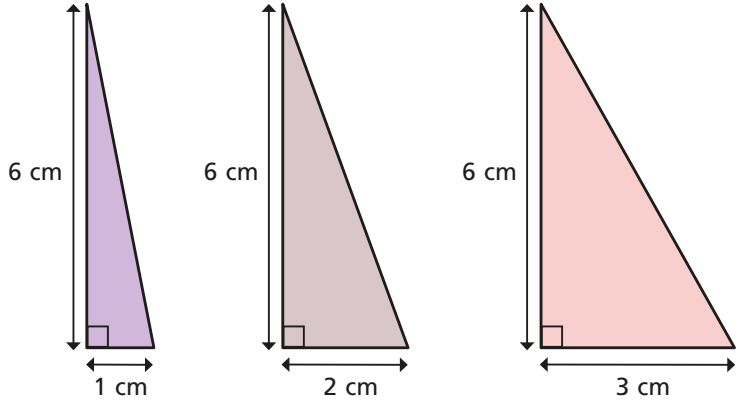
c)



d)



7 The width of the right-angled triangles is increasing by 1 cm.



Investigate the pattern for the areas.

What happens to the pattern if the length **and** width increase?