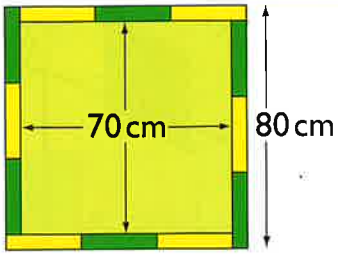
Investigating area and perimeter

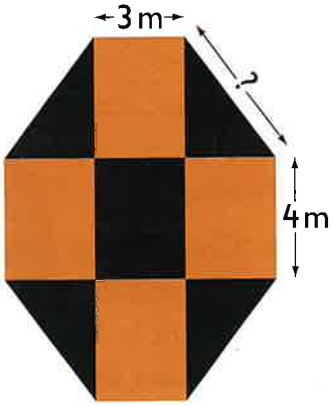
- Choose and use appropriate strategies to solve problems
- Know and use the formula for the area of a rectangle to calculate the area of right-angled triangles given the lengths of the two perpendicular sides

1 Mr Hoffman buys 12 identical tiles at the DIY store.
He fits them round a square bathroom mirror which has sides of 70 cm.



Calculate the area of one of the rectangular tiles.

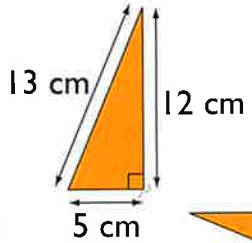
2 This is the floor plan for the entrance hallway of a school.

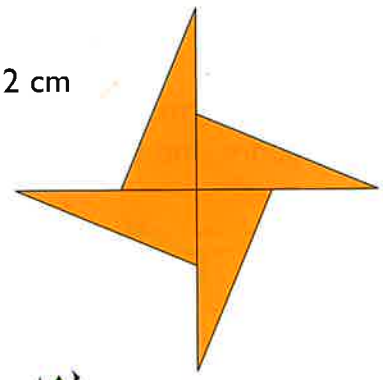


a Each rectangular area is 12 m^2. Find the area of the whole floor plan.

b The perimeter of the floor plan is 34 m. Calculate the longest side of each triangle.

3 Mel made 4 triangles like this.
She used them to make a star.

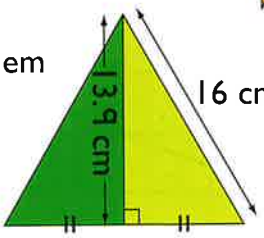


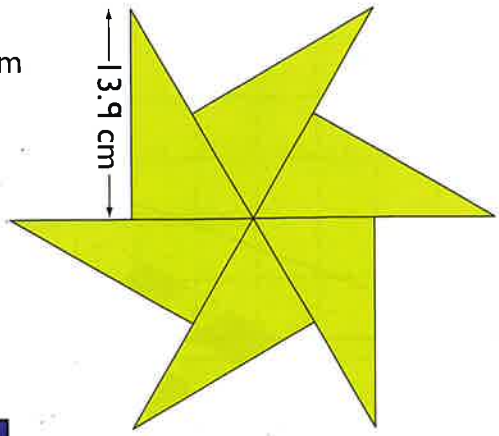


a What is the area of the star?

b What is its perimeter?

4 Jean took 3 equilateral triangles and cut them in half like this.
She used the 6 triangles to make a star.



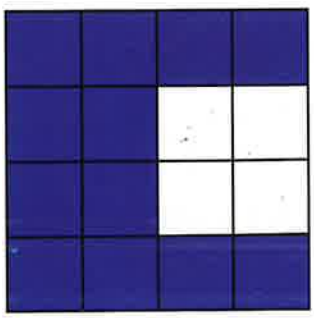


a What is the area of the star?

b What is its perimeter?

Puzzle time

This shape has an area of 12 cm^2 and a perimeter of 20 cm.



a On RCM 54, investigate different shapes having a perimeter of 20 cm.

b Find the area of each shape.

c Can you make a shape where P = 20 cm and A < 9 cm^2? Explain.

You need:
- a copy of RCM 54
- a ruler