

Sujet n°23

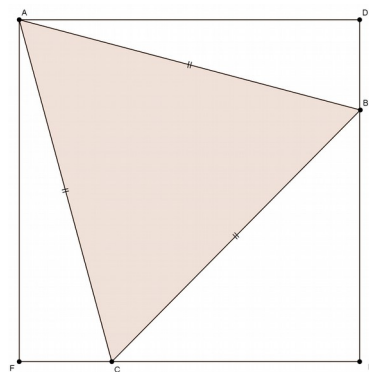
Please do not write on this document, and do not forget to hand it back to the jury at the end.

GEOMETRY : the inscribed equilateral triangle

James likes geometry. His favorite shape is the equilateral triangle. He often plays a geometric game. He draws a figure and tries to find an equilateral triangle inscribed in it.

Observe the following figures drawn by James and work out the value of the area of each inscribed equilateral triangle (round your answers to the nearest tenth). Explain your method to the jury.

1. ADEF is a square and $AD = 10$ cm.



2. ADE is a right-angled isosceles triangle and $AD = 10$ cm.

