

1125-11-1224 **Antonino Leonardis*** (a.leonardis@gmail.com), Via Aosta, 17, 20155, Milan, Italy. *Simple applications of continued fractions and an elementary result on Heron's algorithm (with a generalization to n -adic numbers).*

The talk will start with some applications of continued fractions in order to obtain geometrical illusions. After this, it will deal with the pythagorean problem of the right-angled isosceles triangles finding all solutions to the simple diophantine equation $l^2 + (l + 1)^2 = d^2$, which will give a “pseudo-pythagoric” triangle. The author will also prove a theorem (main result) which relates continued fractions with Heron's algorithm, giving some examples. A generalization of the theorem in the n -adic completions is also being analyzed by the author and will possibly be considered during the talk. (Received September 15, 2016)