Problem of the Week Problem D Three Triangles and a Square

Simon has a rope that is 200 cm long. They cut the rope into four pieces so that one piece can be arranged, with its two ends touching, to form a square, and the three remaining pieces can be arranged, with each having its two ends touching, to form three identical equilateral triangles. If all four shapes have integer side lengths, in cm, determine all possibilities for the side lengths of each triangle and the square.

