9. TRIANGLE (5 points) — *Jaan Kalda.*

Three identical small iron balls were initially arranged in an equilateral triangle formation, connected by massless non-stretchable threads. Upon being thrown into the air, the system experienced the following conditions: (a) all threads were taut initially; (b) all balls possessed different velocities; (c) all velocities were confined to the plane of the triangle as the system underwent free fall within Earth's gravitational field. At a certain moment $t = 0$, two threads ruptured, leaving two balls tethered together while the third ball separated from the rest of the system. The accompanying diagram depicts the positions of all three balls and the remaining thread within the plane of their initial arrangement at a later moment of time $t = T$ when all the balls were still continuing their free fall. To answer the questions below, you can take measurements from the figure.

i) *(4 points)* By how many degrees did the remaining thread rotate during the time period from $t = 0$ to $t = T$?

ii) *(1 point)* Was the rotation clockwise or counterclockwise?

