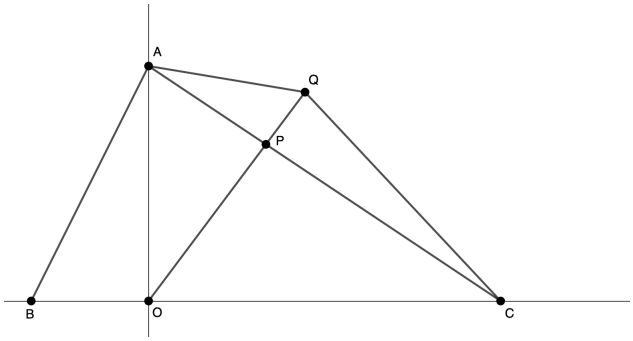
In the figure below, a triangle has points $A(0,4)$, $B(-2,0)$, and $C(6,0)$. Point P is a non-stationary point that lies on segment AC, and point Q is a point that lies on the extension of segment OP, where O represents the origin. The areas of ABO and QAC are always equal. Given this information, answer the questions below.[1]

(1): Find the equation of AC.

(2): Find the coordinates of Q when OP splits the area of ABC in half.

(3): Find the area of the polygon formed by the motion of segment PQ when P has fully traveled the distance of AC.



[1]Toho High School, Tokyo