As shown in Figure 1 below, Point P starts at Point $O(0,0)$, and travels along the bolded path towards $(6,0)$. Let x be the x-coordinate of Point P at any time. From this, the coordinates of Point Q is $(x,0)$. With this information, answer the questions below.[1]

(1): Find time t, where OP has a slope of $\frac{3}{2}$. Assume that $t=0$ when P starts moving.

(2): Figure 2 represents the area of OPQ versus time. Complete the graph for $\frac{7}{2} < t < 5$.

(3): Find all values of t where $OPQ = 4cm^2$.

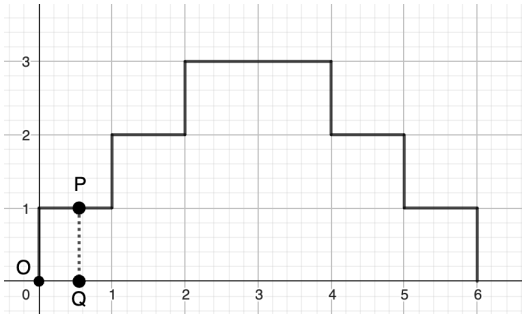

Figure 1

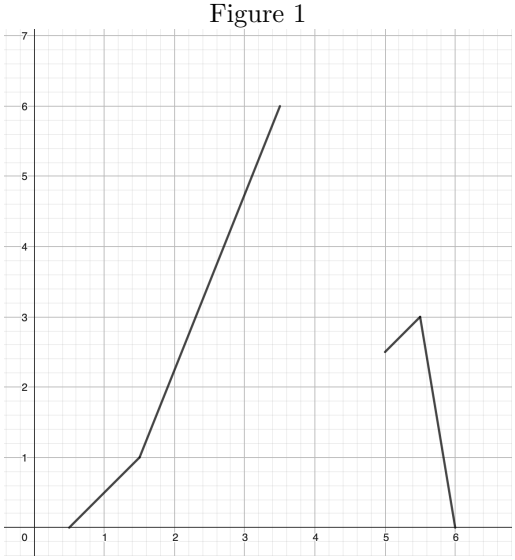

Figure 2

[1]Science and Technology High School, Tokyo Institute of Technology