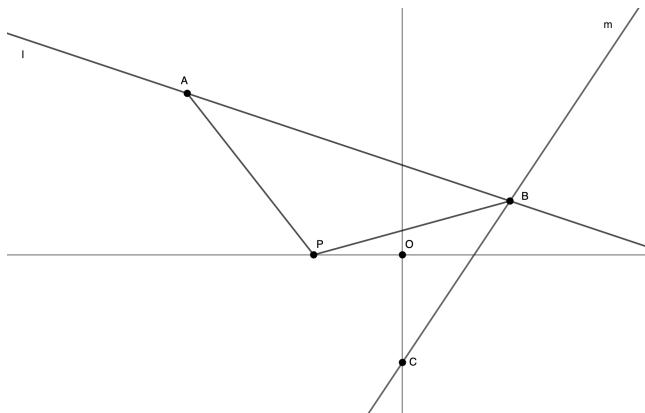


As shown in the figure below, line l crosses $A(-4, 3)$ and $B(2, 1)$. Line m has a positive slope and crosses B , the x-axis, and C . P is a point that lies on the x-axis and the origin is represented by O . Given this information, answer the questions below.¹

- (1): Find the coordinates of B after a 180° rotation about the origin.
- (2): Find the slope of l .
- (3): Find the equation of m when triangle AOB is congruent to triangle COB .
- (4): Find the coordinates of P when $AB + BP$ is the shortest.



¹Aomori Prefecture