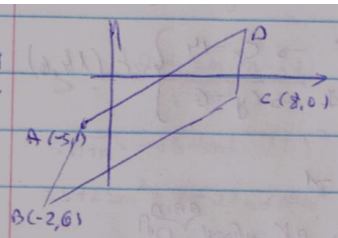
3.9




$m_{AB} = \frac{5}{3}$ , $m_{BC} = -\frac{6}{10} = -\frac{3}{5}$ (k)

$m_{AB} \cdot m_{BC} = -1$

$AD \parallel BC$ , $AB \parallel CD$ (P)

$m_{AB} = \frac{5}{3} \rightarrow y_{CD} = \frac{5}{3}x - \frac{40}{3}$

$m_{BC} = -\frac{3}{5} \rightarrow y_{AD} = -\frac{3}{5}x - 2$

$\frac{5}{3}x - \frac{40}{3} = -\frac{3x}{5} - 2$

$AD \perp CD$ D

$x = 5$

$D(5,-5)$

$S = AB \cdot BC = \sqrt{3^2+5^2} \cdot \sqrt{10^2+6^2} = \sqrt{34} \cdot \sqrt{136} = \sqrt{34}\sqrt{34 \cdot 4} = 68$