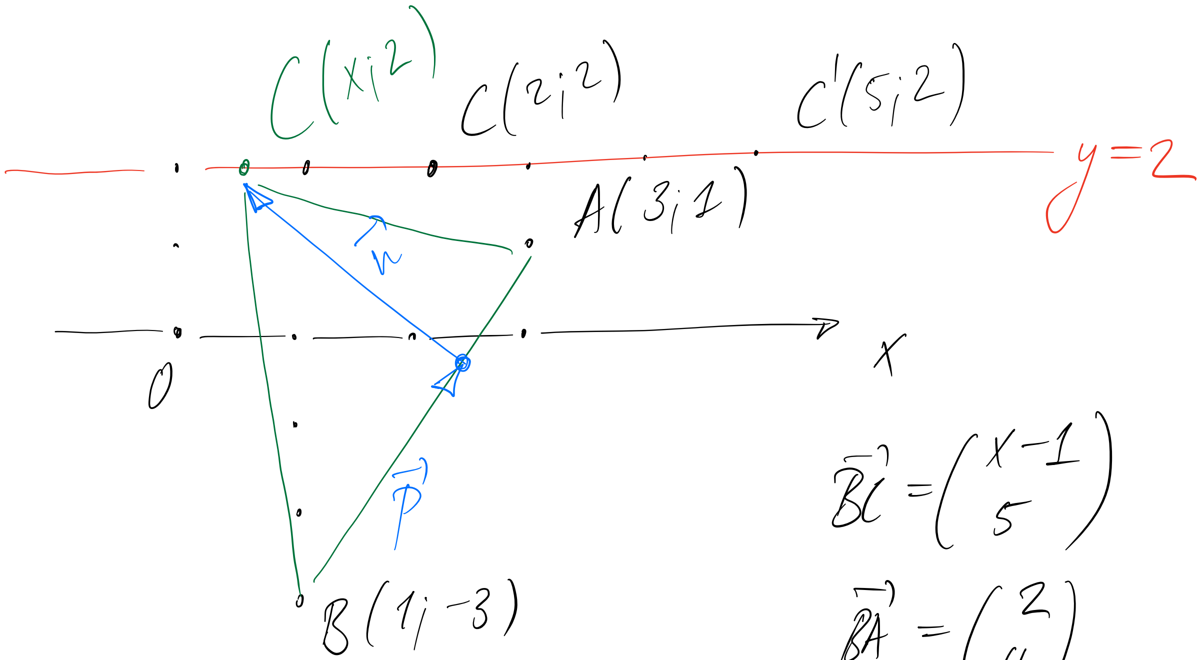

$$\vec{BC} = \begin{pmatrix} x-1 \\ 5 \end{pmatrix}$$

$$\vec{BA} = \begin{pmatrix} 2 \\ 4 \end{pmatrix}$$

$C(x;y)$ donne $G = \frac{1}{3}(x+4; y-2)$

Vu que $G \in Ox$, $y = 2$

$$Aire_{ABC} = A_{ABC} = A = \|\vec{BA}\| \cdot \|\vec{n}\| \cdot \frac{1}{2}$$

$$\vec{n} = \vec{BC} - \vec{p} = \begin{pmatrix} x-1 \\ 5 \end{pmatrix} - \vec{p}$$

$$\vec{p} = \frac{\vec{BC} \cdot \vec{BA}}{\|\vec{BA}\|^2} \cdot \vec{BA} = \frac{2x-2+20}{20} \cdot \begin{pmatrix} 2 \\ 4 \end{pmatrix} = \frac{x+9}{10} \begin{pmatrix} 2 \\ 4 \end{pmatrix}$$

$$\vec{n}' = \begin{pmatrix} x-1 \\ 5 \end{pmatrix} - \begin{pmatrix} \frac{x+9}{5} \\ \frac{2x+18}{5} \end{pmatrix} = \begin{pmatrix} \frac{5x-5-x-9}{5} \\ \frac{25-2x-18}{5} \end{pmatrix}$$

$$\vec{n}' = \begin{pmatrix} \frac{4x-14}{5} \\ \frac{-2x+7}{5} \end{pmatrix}$$

$$\Rightarrow \quad 6 = \sqrt{20} \cdot \left(\left(\frac{4x-14}{5}\right)^2 + \left(\frac{-2x+7}{5}\right)^2 \right)^{1/2}$$

$$\Rightarrow \quad 36 = 20 \cdot \frac{1}{25} \left((4x-14)^2 + (2x-7)^2 \right)$$

$$\Leftrightarrow \quad 45 = (4x-14)^2 + (2x-7)^2$$

$$\Leftrightarrow \quad x^2 - 7x + 10 = 0 \quad \Leftrightarrow \quad \begin{matrix} x=2 \\ x=5 \end{matrix}$$