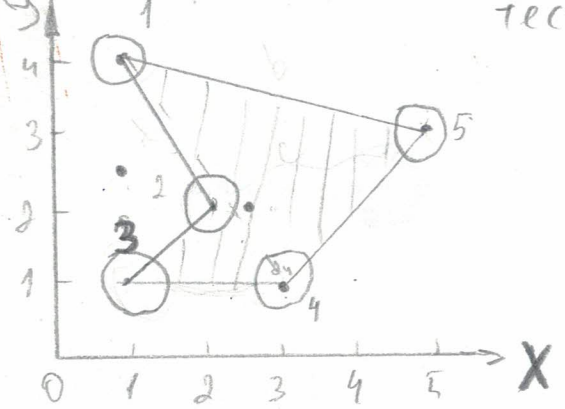


тестовый пример ячейки

1: (1,4)
2: (2,2)
3: (1,1)
4: (3,1)
5: (5,3)

$$S_{сектора} = \frac{\pi \cdot R^2}{360^\circ} \cdot \alpha^\circ$$

$$S_{фиг} = \frac{1}{2}\left| \sum_{i=1}^{n-1} (x_i y_{i+1} - x_{i+1} y_i) + x_n y_1 - x_1 y_n \right|$$

$$\alpha_i = \arccos\left(\frac{L_{i-1,i}^2 + L_{i,i+1}^2 - L_{i-1,i+1}^2}{2 \cdot L_{i-1,i} \cdot L_{i,i+1}}\right)$$

$$L_{i-1,i} = \sqrt{(x_i - x_{i-1})^2 + (y_i - y_{i-1})^2}$$

$$L_{i,i+1} = \sqrt{(x_i - x_{i+1})^2 + (y_i - y_{i+1})^2}$$

$$L_{i-1,i+1} = \sqrt{(x_{i-1} - x_{i+1})^2 + (y_{i-1} - y_{i+1})^2}$$

$$\sum_{i=1}^{n} \alpha_i = (n-2) \cdot 180$$

$$P_{об} = \sum_{i=1}^{n} \frac{\pi R_i}{180^\circ} \alpha_i^\circ$$

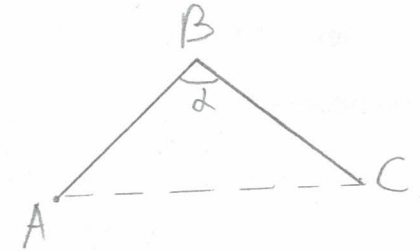
$$P_{см} = \sum_{i=1}^{n-1} \left(L_{i,i+1} - (R_i + R_{i+1})\right) + P_{об}$$

Проблема последней грани

$$P_{см} = P_{об} + \sum L_{wall}$$

↑ суммарная длина стенки

Пример



$$\alpha = \arccos\left(\frac{AB^2 + BC^2 - AC^2}{2 \cdot AB \cdot BC}\right)$$

$$AB = \sqrt{(x_A - x_B)^2 + (y_A - y_B)^2}$$

x_A, y_A - координаты точки A

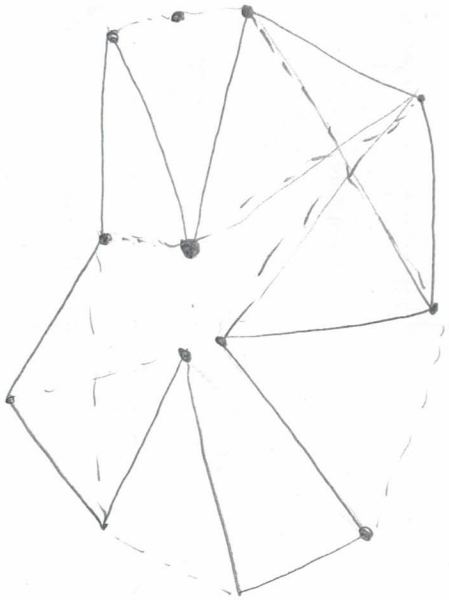
$$\alpha_i = \arccos\left(\frac{(x_i - x_{i+1})^2 + (y_i - y_{i+1})^2 + (x_i - x_{i-1})^2 + (y_i - y_{i-1})^2 - (x_{i-1} - x_{i+1})^2 - (y_{i-1} - y_{i+1})^2}{2 \cdot \sqrt{(x_i - x_{i+1})^2 + (y_i - y_{i+1})^2} \cdot \sqrt{(x_i - x_{i-1})^2 + (y_i - y_{i-1})^2}}\right)$$

$$L_{i-1,i} = \sqrt{(x_i - x_{i-1})^2 + (y_i - y_{i-1})^2}$$

$$L_{i,i+1} = \sqrt{(x_i - x_{i+1})^2 + (y_i - y_{i+1})^2}$$

$$L_{i-1,i+1} = \sqrt{(x_{i-1} - x_{i+1})^2 + (y_{i-1} - y_{i+1})^2}$$

$$\alpha_i = \arccos\left(\frac{L_{i-1,i}^2 + L_{i,i+1}^2 - L_{i-1,i+1}^2}{2 \cdot L_{i-1,i} \cdot L_{i,i+1}}\right)$$



APC
PILOT

Было произведено
замена

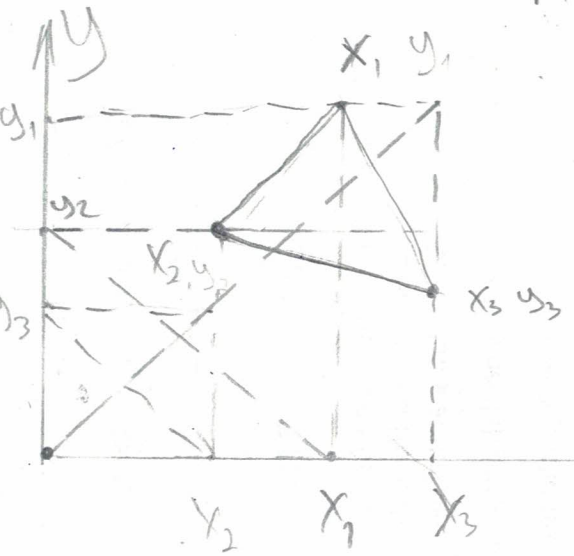
Ошибка задания
номеров ячеек.

Присутствует
ошибка задания
номеров выделенных
участков

ErrIs

Присутствуют неточности в
исходных данных!

Пример для треугольника



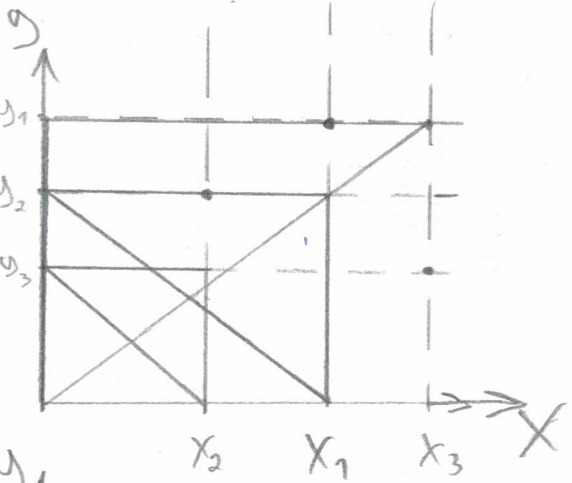
$$x_1 y_2 + x_2 y_3 + x_3 y_1$$

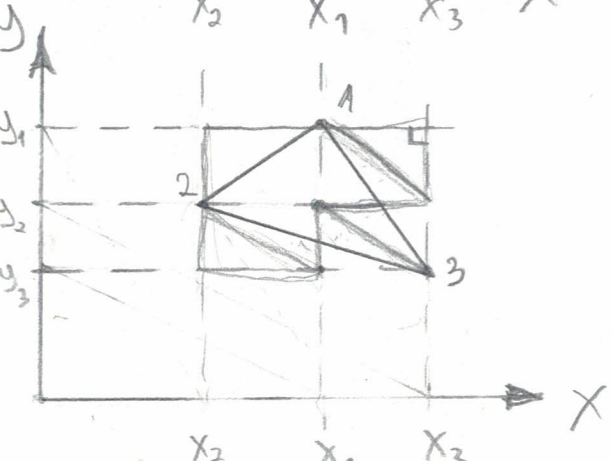
$$- x_2 y_1 - x_3 y_2 - x_1 y_3$$

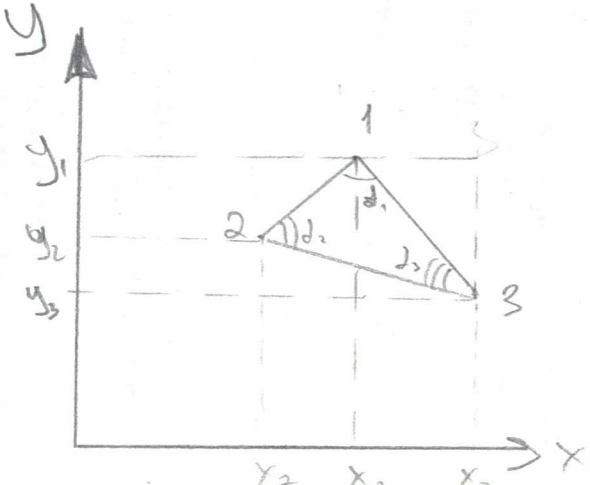
$$\rightarrow \frac{1}{2} \left| y_1 (x_3 - x_2) + y_2 (x_1 - x_3) + y_3 (x_2 - x_1) \right|$$

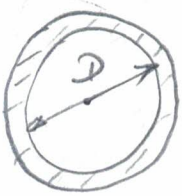
$n \geq 3$

$$S = \frac{1}{2} \left| \sum_{i=1}^{n-1} (x_i y_{i+1} - x_{i+1} y_i) + x_n \cdot y_1 - x_1 \cdot y_n \right|$$







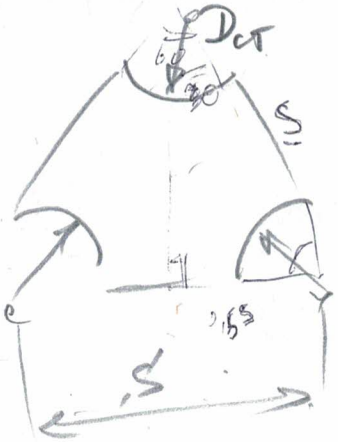


$$D_т = D$$

$$F = \frac{\pi D^2}{4}$$

$n_л \approx 6$

$$D_т = \frac{4F}{\pi_т} = D_т = D$$



$$F = S_\Delta - 3 \cdot S_{\text{сект}} = S_\Delta - \frac{1}{2} \cdot S_{ст}$$

$D_т =$

VIII

$D_т =$

$\lambda_{тр} =$

$\tau_{тр}$

$$D = \frac{4\pi D^2}{4\pi_т} = \frac{\pi D^2}{\frac{1}{2}\pi D_{ст}}$$

$D_{ст} = 2D \approx 16$ мм

$$F = \frac{S^2}{4}\sqrt{3} - \frac{1}{2} \cdot \frac{\pi \cdot D_{ст}^2}{4}$$

$$S = \sqrt{\frac{4}{\sqrt{3}}\left(F + \frac{\pi D_{ст}^2}{8}\right)} \approx 18{,}661 \text{ мм}$$

$D_{ст} = 16$ мм $\quad S = 18{,}661$ мм.