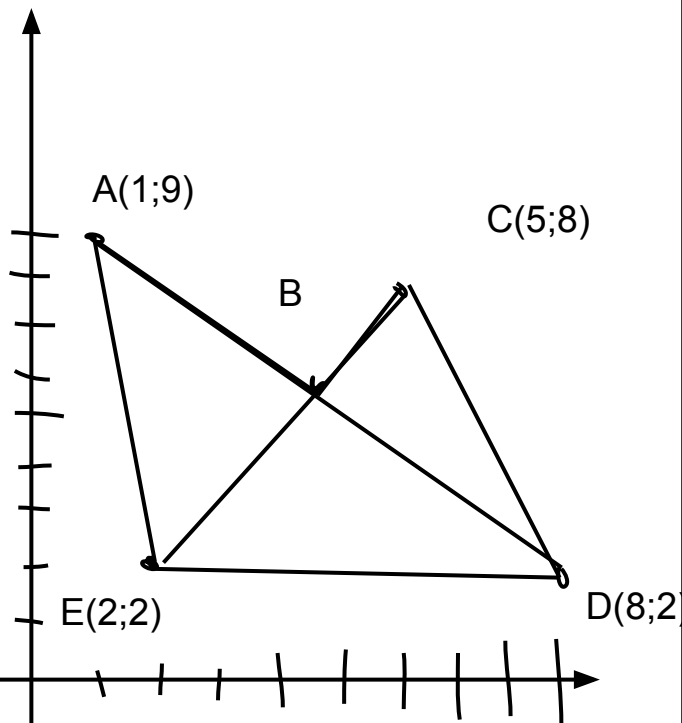


На координатной плоскости заданы точки A(1;9), C(5;8), D(8,2), E(2,2)

Найти площадь 5-и угольника ABCDE, где B-точка пересечения прямых EC и AD

(x,y)

$$\begin{aligned} SAED &= \frac{1}{2} \cdot 7 \cdot 6 = 42/2 \\ SECD &= \frac{1}{2} \cdot 6 \cdot 6 = 36/2 \\ SEBD &= \frac{1}{2} \cdot 6 \cdot 4 = 24/2 \\ SEABCD &= SAED + SECD - SEBD \\ &= (42 + 36 - 24) / 2 = 54/2 = 27 \end{aligned}$$



$$\begin{aligned} AE^2 &= 7^2 + 1 = 50 \\ CD^2 &= 6^2 + 3^2 = 45 \\ ED &= 6 \\ CE^2 &= 3^2 + 6^2 = 45 \\ AD^2 &= 7^2 + 7^2 = 2 \cdot 49 \end{aligned}$$

$$\begin{aligned} \text{const} &= \{(x_2 - x_1), (y_2 - y_1)\} \\ \text{rezina} &= \{(x - x_1), (y - y_1)\} \\ \text{rezina} &= \text{const} \cdot k \\ x - x_1 &= k(x_2 - x_1) \\ y - y_1 &= k(y_2 - y_1) \\ k &= (x - x_1) / (x_2 - x_1) \\ k &= (y - y_1) / (y_2 - y_1) \\ (x - x_1) / (x_2 - x_1) &= (y - y_1) / (y_2 - y_1) \end{aligned}$$

$$\begin{aligned} \text{AD} \\ (x - 1) / (8 - 1) &= (y - 9) / (2 - 9) \\ -(x - 1) &= y - 9 \\ y &= -x + 10 \\ \text{EC} \\ (x - 2) / (5 - 2) &= (y - 2) / (8 - 2) \\ y - 2 &= 2x - 4 \\ y &= 2x - 2 \\ -x + 10 &= 2x - 2 \\ 3x &= 12 \\ x &= 4 \\ y &= 8 - 2 = 6 \\ B &= (4; 6) \end{aligned}$$

