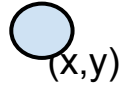


На координатной плоскости заданы точки A(1;9), C(5;8), D(8,2),E(2,2)

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

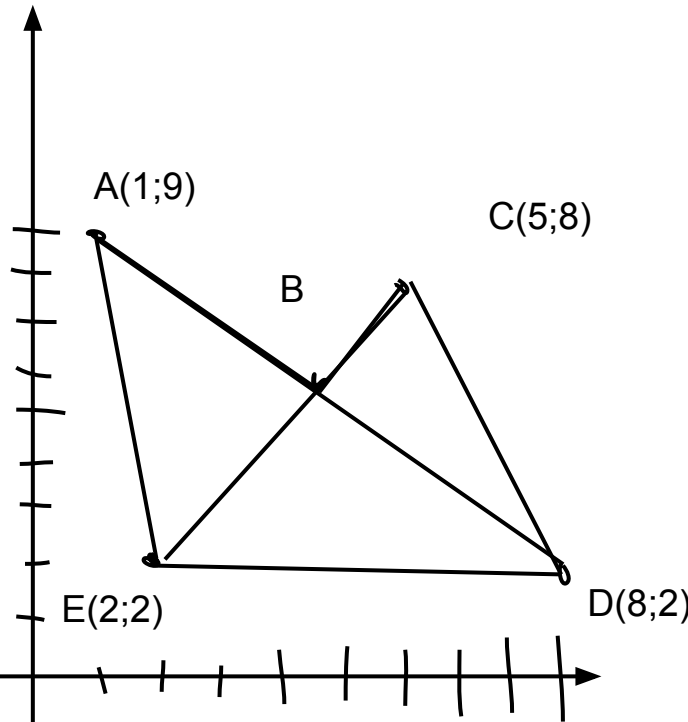


$$SAED = \frac{1}{2} \cdot 7 \cdot 6 = 42/2$$

$$SECD = \frac{1}{2} \cdot 6 \cdot 6 = 36/2$$

$$SEBD = \frac{1}{2} \cdot 6 \cdot 4 = 24/2$$

$$SEABCD = SAED + SECD - SEBD = (42 + 36 - 24) / 2 = 54/2 = 27$$



$$AE^2 = 7^2 + 1 = 50$$

$$CD^2 = 6^2 + 3^2 = 45$$

$$ED = 6$$

$$CE^2 = 3^2 + 6^2 = 45$$

$$AD^2 = 7^2 + 7^2 = 2 \cdot 49$$

$$\text{const} = \{(x_2 - x_1), (y_2 - y_1)\}$$

$$\text{rezina} = \{(x - x_1), (y - y_1)\}$$

$$\text{rezina} = \text{const} \cdot k$$

$$x - x_1 = k(x_2 - x_1)$$

$$y - y_1 = k(y_2 - y_1)$$

$$k = \frac{(x - x_1)}{(x_2 - x_1)}$$

$$k = \frac{(y - y_1)}{(y_2 - y_1)}$$

$$\frac{(x - x_1)}{(x_2 - x_1)} = \frac{(y - y_1)}{(y_2 - y_1)}$$

AD

$$\frac{(x - 1)}{(8 - 1)} = \frac{(y - 9)}{(2 - 9)}$$

$$-(x - 1) = y - 9$$

$$y = -x + 10$$

EC

$$\frac{(x - 2)}{(5 - 2)} = \frac{(y - 2)}{(8 - 2)}$$

$$y - 2 = 2x - 4$$

$$y = 2x - 2$$

$$-x + 10 = 2x - 2$$

$$3x = 12$$

$$x = 4$$

$$y = 8 - 2 = 6$$

B(4;6)

