

Zadatak 2. Točkama P_1 , P_2 , P_3 i P_4 dužina \overline{AB} podijeljena je na pet sukladnih dijelova. Odredi koordinate djelišnih točaka ako je $A(1, -5)$, $B(6, 5)$.

Rješenje.

$$A(1, -5)$$

$$B(6, 5)$$

$$\lambda_1 = \frac{|AP_1|}{|P_1B|} = \frac{1}{4}$$

$$x_{P_1} = \frac{1 + \frac{1}{4} \cdot 6}{\frac{5}{4}} = 2$$

$$y_{P_1} = \frac{-5 + \frac{1}{4} \cdot 5}{\frac{5}{4}} = -3$$

$$P_1(2, -3)$$

$$\lambda_2 = \frac{|AP_2|}{|P_2B|} = \frac{2}{3}$$

$$x_{P_2} = \frac{1 + \frac{2}{3} \cdot 6}{\frac{5}{3}} = 3$$

$$y_{P_2} = \frac{-5 + \frac{2}{3} \cdot 5}{\frac{5}{3}} = -1$$

$$P_2(3, -1)$$

$$\lambda_3 = \frac{|AP_3|}{|P_3B|} = \frac{3}{2}$$

$$x_{P_3} = \frac{1 + \frac{3}{2} \cdot 6}{\frac{5}{2}} = 4$$

$$y_{P_3} = \frac{-5 + \frac{3}{2} \cdot 5}{\frac{5}{2}} = 1$$

$$P_3(4, 1)$$

$$\lambda_4 = \frac{|AP_4|}{|P_4B|} = 4$$

$$x_{P_4} = \frac{1 + 4 \cdot 6}{5} = 5$$

$$y_{P_4} = \frac{-5 + 4 \cdot 5}{5} = 3$$

$$P_4(5, 3)$$