Zadatak 11. U kojim točkama pravac $3x - 2y + 6 = 0$ siječe parabolu $y^2 = 6x$?

Rješenje.

$$
\begin{aligned}
p \ \ldots\ & 3x - 2y + 6 = 0 \implies y = \frac{3}{2}x + 3 \\
P \ \ldots\ & y^2 = 6x \\
p \cap P \ \ldots\ & \left(\frac{3}{2}x + 3\right)^2 = 6x \\
& \frac{9}{4}x^2 + 9x + 9 - 6x = 0 \\
& \frac{9}{4}x^2 + 3x + 9 = 0 \quad / \cdot 4 \\
& 9x^2 + 12x + 36 = 0 \quad / : 3 \\
& 3x^2 + 4x + 12 = 0 \\
& x_{1,2} = \frac{-4 \pm \sqrt{16 - 144}}{6} = \frac{-4 \pm \sqrt{-128}}{6} \\
& D < 0 \text{ nemaju zajedničkih točaka}
\end{aligned}
$$