Zadatak 13. Koliki kut zatvaraju asimptote hiperbole
$3x^2 - y^2 = 9$?

Rješenje.

$$3x^2 - y^2 = 9 \quad / : 9$$

$$\frac{x^2}{3} - \frac{y^2}{9} = 1 \implies \boxed{a = \sqrt{3}}, \quad \boxed{b = 3}$$

asimptote $\ldots \ y = \pm\frac{b}{a}x$

$$y = \pm\frac{3}{\sqrt{3}}x$$

$$y = \pm\sqrt{3}x$$

$$\operatorname{tg}\alpha = \left|\frac{k_2 - k_1}{1 + k_1 k_2}\right| = \left|\frac{\sqrt{3} + \sqrt{3}}{1 - \sqrt{3}\sqrt{3}}\right| = \left|\frac{2\sqrt{3}}{1 - 3}\right| = \left|-\sqrt{3}\right| = \sqrt{3}$$

$$\implies \boxed{\alpha = \frac{\pi}{3} = 60°}$$