

Zadatak 19. Odredi skup točaka ravnine koje su od asimptote hiperbole $y = \frac{x-1}{2x+3}$ udaljene za 1.

Rješenje.

$$H \dots y = \frac{x-1}{2x+3}$$

$$y = \frac{1}{2} \cdot \frac{2x-2}{2x+3}$$

$$y = \frac{1}{2} \cdot \frac{2x+3-5}{2x+3}$$

$$y = \frac{1}{2} - \frac{5}{2x+3}$$

$$\left(y - \frac{1}{2}\right) = -\frac{5}{2} \cdot \frac{1}{x + \frac{3}{2}}$$

$$\left(x + \frac{3}{2}\right) \left(y - \frac{1}{2}\right) = -\frac{5}{2}$$

asimptote ... $x = -\frac{3}{2}, y = \frac{1}{2}$