

Predmet: Mataliza 1
Ukol: 5.
Verze: 1.
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Prezdivka: DN

zadani

$$\lim_{x \rightarrow 1} \frac{x^3 - x^2 - x + 1}{x^3 + x^2 - x - 1}$$

reseni

$$\lim_{x \rightarrow 1} \frac{(x-1)(x^2-1)}{(x+1)(x^2-1)}$$

$$\lim_{x \rightarrow 1} \frac{x-1}{x+1}$$

$$\frac{1-1}{1+1} = \frac{0}{2} = 0$$

$$\underline{\underline{\lim_{x \rightarrow 1} \frac{x^3 - x^2 - x + 1}{x^3 + x^2 - x - 1} = 0}}}$$

zadani

$$\lim_{x \rightarrow 1} \frac{x^3 + x^2 - x - 1}{x^3 + 2x^2 - x - 2}$$

reseni

$$\lim_{x \rightarrow 1} \frac{(x^2-1)(x+1)}{(x^2-1)(x+2)}$$

$$\lim_{x \rightarrow 1} \frac{(x+1)}{(x+2)}$$

$$\frac{(1+1)}{(1+2)} = \frac{2}{3}$$

$$\underline{\underline{\lim_{x \rightarrow 1} \frac{x^3 + x^2 - x - 1}{x^3 + 2x^2 - x - 2} = \frac{2}{3}}}}$$

zadani

$$\lim_{x \rightarrow -1} \frac{x^3 - x^2 - x + 1}{x^3 + x^2 - x - 1}$$

reseni

$$\lim_{x \rightarrow -1} \frac{(x-1)(x^2-1)}{(x+1)(x^2-1)}$$

$$\lim_{x \rightarrow -1} \frac{(x-1)}{(x+1)}$$

$$\frac{-1-1}{(-1 \pm \epsilon) + 1} = \frac{-2}{0 \pm \epsilon} = \pm \infty$$

$$\lim_{x \rightarrow (-1)^-} \frac{(x-1)}{(x+1)} = \infty$$

$$\underline{\underline{\lim_{x \rightarrow (-1)^+} \frac{(x-1)}{(x+1)} = -\infty}}}$$

zadani

$$\lim_{x \rightarrow -1} \frac{x^3 + x^2 - x - 1}{x^3 + 2x^2 - x - 2}$$

reseni

$$\lim_{x \rightarrow -1} \frac{(x^2-1)(x+1)}{(x^2-1)(x+2)}$$

$$\lim_{x \rightarrow -1} \frac{(x+1)}{(x+2)}$$

$$\frac{(-1+1)}{(-1+2)} = \frac{0}{1}$$

$$\underline{\underline{\lim_{x \rightarrow -1} \frac{x^3 + x^2 - x - 1}{x^3 + 2x^2 - x - 2} = 0}}}$$