

$$f(x) = \frac{1}{\sqrt{2x^2+5x-2}} \Rightarrow \frac{-3 \pm \sqrt{9+16}}{4} = \frac{-3 \pm 5}{4} = \begin{cases} -2 \\ \frac{1}{2} \end{cases}$$

$$2 \cdot (x+2) \cdot (x-\frac{1}{2}) > 0$$

$$(x+2) \cdot (x-\frac{1}{2}) > 0$$

$$+ \cdot + > 0 \quad - \cdot - > 0$$

$$x+2 > 0 \wedge x-\frac{1}{2} > 0 \quad \text{nebo}$$

$$\underline{x > -2} \wedge \underline{x > \frac{1}{2}}$$

$$\underline{xE = (\frac{1}{2}; +\infty)}$$

$$x+2 < 0 \wedge x-\frac{1}{2} < 0$$

$$\underline{x < -2} \wedge \underline{x < \frac{1}{2}}$$

$$\underline{xE = (-\infty; -2)}$$

$$\underline{Df = \mathbb{R} - (-2; \frac{1}{2}) = (-\infty; -2) \cup (\frac{1}{2}; +\infty)}$$

$$f_8(x) = \sqrt{\frac{x+2}{4x-6}} \quad \frac{+}{+} = x+2 \geq 0 \wedge 4x-6 > 0$$

$$x+2 \leq 0 \wedge 4x-6 < 0 \quad \text{nebo}$$

$$\underline{x \leq -2} \wedge \underline{x < \frac{3}{2}}$$

$$\underline{xE = (-\infty; -2)}$$

$$\underline{Df_8 = \mathbb{R} - (-2; \frac{3}{2})}$$

$$f_9(x) = \frac{\sqrt{x+2}}{\sqrt{4x-6}} \geq 0 \quad \begin{matrix} x \geq -2 & (-2; \infty) \\ x > \frac{3}{2} & (\frac{3}{2}; \infty) \end{matrix} \quad \begin{matrix} (-2; \infty) \cap (\frac{3}{2}; \infty) \\ \Rightarrow Df_9 = (\frac{3}{2}; \infty) \end{matrix}$$

$$f_{10}(x) = \sqrt{x+4} + \sqrt{\frac{4}{10-x}} > 0 \quad \begin{matrix} x+4 \geq 0 \wedge 10-x > 0 \\ x \geq -4 \wedge x < 10 \end{matrix}$$

$$\underline{xE = (-4; 10)}$$

$$\underline{Df_{10} = (-4; 10)}$$

$$f_{11}(x) = \log(x-3) > 0$$

$$x-3 > 0$$

$$x > 3 \quad \underline{xE = (3; +\infty)}$$

$$\underline{Df_{11} = (3; +\infty)}$$