Klasse	Art	Schwierigkeit	Thema	S. 25
11	**Üben**	**X**	**Gebrochen-rationale Funktionen 3**	**4**

a) $f(x) = \frac{3}{2x-1}$ $D_f = \mathbb{R} \setminus \{\frac{1}{2}\}$

Asymptoten : x = 0,5 ; y = 0

b) $f(x) = \frac{2x^2 - x}{x^2 - 2}$ $D_f = \mathbb{R} \setminus \{-\sqrt{2}; \sqrt{2}\}$

Asymptoten : $x = -\sqrt{2}$; $x = \sqrt{2}$ y = 2

c) $f(x) = \frac{x^2}{(2x+3)(x-5)}$ $D_f = \mathbb{R} \setminus \{-1{,}5 ; 5\}$

Asymptoten : x = - 1,5 ; x = 5 $y = \frac{1}{2}$

d) $f(x) = \frac{x^2 + 3}{x}$ $D_f = \mathbb{R} \setminus \{0\}$

Asymptoten : x = 0 ; $x = \sqrt{2}$ y = x (schräge Asymptote!)

e) $f(x) = 2x - \frac{2}{x+1} = \frac{2x^2 + 2x - 2}{x+1}$ $D_f = \mathbb{R} \setminus \{-1\}$

Asymptoten : x = -1 ; y = 2x

f) $f(x) = \frac{x^2 - 1}{3x+1}$ $D_f = \mathbb{R} \setminus \{-\frac{1}{3}\}$

Asymptoten : $x = -\frac{1}{3}$