

$$2) \lim_{n \rightarrow \infty} \frac{3^n - 2^n}{3^{n-1} + 2^n}$$

passen bei 3^{n-1}

$$\lim_{n \rightarrow \infty} \frac{\frac{3^n}{3^{n-1}} - \frac{2^n}{3^{n-1}}}{\frac{3^{n-1}}{3^{n-1}} + \frac{2^n}{3^{n-1}}} = \lim_{n \rightarrow \infty} \frac{3 - \frac{2^n}{3^{n-1}}}{1 + \frac{2^n}{3^{n-1}}}$$

$$= 3$$

$$3) \lim_{x \rightarrow \frac{5}{2}} \frac{2x^2 - 9x + 10}{2x - 5} = \lim_{x \rightarrow \frac{5}{2}} \frac{2(x - \frac{5}{2})(x - 2)}{(2x - 5)}$$

$$2x^2 - 9x + 10 = 0$$

$$D = 81 - 80 = 1$$

$$D = 1$$

$$x_1 = \frac{9+1}{4} = \frac{10}{4} = \frac{5}{2}$$

$$x_2 = 2$$

$$= \lim_{x \rightarrow \frac{5}{2}} x - 2 =$$

$$= \frac{5}{2} - 2 = 2,5 - 2 = 0,5$$