

mc 4 p 71

$$f(x) = \frac{-ax^3 + 10x^2 - 2x + b}{2x^2 + 2x - 4}$$

$$\lim_{x \rightarrow 1} \frac{ax^3 + 10x^2 - 2x + b}{2x^2 + 2x - 4} = \frac{a + 10 - 2 + b}{0}$$

alleen eindig bij $\frac{0}{0}$, want bij $\frac{k}{0}$ is limietwaarde $+\infty$ of $-\infty$

$$\Rightarrow a + b + 8 = 0$$

$$\begin{aligned} \lim_{x \rightarrow -2} \frac{ax^3 + 10x^2 - 2x + b}{2x^2 + 2x - 4} &= \frac{-8a + 40 + 4 + b}{8 - 4 - 4} \\ &= \frac{-8a + b + 44}{0} \end{aligned}$$

$$\Rightarrow -8a + b + 44 = 0$$

Stelsel oplossen:

$$\begin{cases} a + b = -8 \\ -8a + b = -44 \end{cases} \Leftrightarrow \begin{cases} b = -8 - a \\ -8a - 8 - a = -44 \end{cases}$$

$$\Leftrightarrow \begin{cases} b = -8 - a \\ -9a = -36 \end{cases}$$

$$\Leftrightarrow \begin{cases} b = -12 \\ a = 4 \end{cases}$$

Antw $a = 4$ en $b = -12$