# LIMIT TAK HINGGA FUNGSI ALJABAR

## METODE PANGKAT TERTINGGI DAN MERASIONALKAN

$$1.\lim_{x\to\infty}\frac{3x^2-2x+1}{x^3-2x-4}=\lim_{x\to\infty}\frac{\frac{\square}{\square}-\frac{\square}{\square}+\frac{\square}{\square}}{\frac{\square}{\square}-\frac{\square}{\square}-\frac{\square}{\square}}=\lim_{x\to\infty}\frac{\frac{\square}{\square}-\frac{\square}{\square}+\frac{\square}{\square}}{\dots-\frac{\square}{\square}-\frac{\square}{\square}}=\frac{\dots-\dots+\dots}{\dots-\dots-\dots}=\dots$$

$$2.\lim_{x\to\infty}\frac{(x-2)^2}{x^2-2x-4}=\lim_{x\to\infty}\frac{\dots\dots-\dots\dots+\dots}{\dots\dots-\dots\dots-\dots}=\lim_{x\to\infty}\frac{\frac{\square}{\square}-\frac{\square}{\square}+\frac{\square}{\square}}{\frac{\square}{\square}-\frac{\square}{\square}-\frac{\square}{\square}}=\lim_{x\to\infty}\frac{\dots-\frac{\square}{\square}+\frac{\square}{\square}}{\dots-\frac{\square}{\square}-\frac{\square}{\square}}$$

$$=\frac{\dots-\dots+\dots}{\dots-\dots-\dots}=\dots$$

$$3.\lim_{x\to\infty}\sqrt{5x-3}-\sqrt{3x+1}=\lim_{x\to\infty}\sqrt{\dots\dots-\dots}-\sqrt{\dots+\dots}\;x\frac{\sqrt{\dots-\dots}+\sqrt{\dots+\dots}}{\sqrt{\dots-\dots}+\sqrt{\dots+\dots}}$$

$$=\lim_{x\to\infty}\frac{(\dots-\dots)-(\dots-\dots)}{\sqrt{\dots-\dots}+\sqrt{\dots+\dots}}=\lim_{x\to\infty}\frac{\dots+\dots}{\sqrt{\dots-\dots}+\sqrt{\dots+\dots}}$$

$$=\lim_{x\to\infty}\frac{\frac{\square}{\square}\dots\frac{\square}{\square}}{\sqrt{\frac{\square}{\square}-\frac{\square}{\square}}+\sqrt{\frac{\square}{\square}+\frac{\square}{\square}}}=\frac{\square}{\square}=\dots$$

$$4.\lim_{x\to\infty}\sqrt{4x^2+6x-3}-\sqrt{4x^2-2x+1}=\lim_{x\to\infty}\sqrt{\dots\dots+\dots\dots-\dots}-\sqrt{\dots-\dots+\dots}\;x\frac{\sqrt{\dots+\dots-\dots}+\sqrt{\dots+\dots-\dots}}{\sqrt{\dots+\dots-\dots}+\sqrt{\dots+\dots-\dots}}$$

$$=\lim_{x\to\infty}\frac{(\dots+\dots\dots-\dots)-(\dots+\dots\dots-\dots)}{\sqrt{\dots+\dots-\dots}+\sqrt{\dots-\dots+\dots}}=\lim_{x\to\infty}\frac{\dots+\dots}{\sqrt{\dots+\dots-\dots}+\sqrt{\dots-\dots+\dots}}$$

$$=\lim_{x\to\infty}\frac{\frac{\square}{\square}\dots\frac{\square}{\square}}{\sqrt{\frac{\square}{\square}+\frac{\square}{\square}-\frac{\square}{\square}}+\sqrt{\frac{\square}{\square}-\frac{\square}{\square}+\frac{\square}{\square}}}=\frac{\square}{\sqrt{\square}+\sqrt{\square}}=\frac{\square}{\square}=\dots$$