LIMIT TAK HINGGA FUNGSI ALJABAR

METODE PANGKAT TERTINGGI DAN MERASIONALKAN

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

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

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

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

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

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

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

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

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

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