

**LEMBAR KERJA PESERTA DIDIK
MATEMATIKA TINGKAT LANJUT
SMAN 1 PALIMANAN**

PERTEMUAN KE 3 (TIGA)

Kelompok ke :

Ketua Kelompok :

Anggota 1.

2.

3.

4.

5.

1. Nilai dari $\lim_{x \rightarrow \infty} \frac{3x+1}{2x}$ adalah ...

$$\lim_{x \rightarrow \infty} \frac{3x+1}{2x} = \lim_{x \rightarrow \infty} \frac{3x+1}{2x} \cdot \frac{1}{1}$$

$$= \lim_{x \rightarrow \infty} \frac{\frac{3x}{2x} + \frac{1}{2x}}{1}$$

$$= \lim_{x \rightarrow \infty} \frac{+ \frac{1}{2x}}{1}$$

$$= \frac{+}{1}$$

$$\lim_{x \rightarrow \infty} \frac{3x+1}{2x} = \frac{3}{2}$$

2. Nilai dari $\frac{3x-2}{5x^2-2x+1}$ adalah ...

$$\lim_{x \rightarrow \infty} \frac{3x-2}{5x^2-2x+1} = \lim_{x \rightarrow \infty} \frac{3x-2}{5x^2-2x+1} \cdot \frac{\frac{1}{x^2}}{\frac{1}{x^2}}$$

$$= \lim_{x \rightarrow \infty} \frac{\frac{3x}{x^2} - \frac{2}{x^2}}{\frac{5x^2}{x^2} - \frac{2x}{x^2} + \frac{1}{x^2}}$$

$$= \lim_{x \rightarrow \infty} \frac{\frac{3}{x} - \frac{2}{x^2}}{5 - \frac{2}{x} + \frac{1}{x^2}}$$

$$= \frac{0 - 0}{5 - 0 + 0}$$

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

3. Nilai dari $\lim_{x \rightarrow \infty} \frac{2x^2+x-3}{3x+1}$ adalah ...

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

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

$$= \lim_{x \rightarrow \infty} \frac{+ \text{---} - \text{---} 3}{\text{---} + \text{---} 1}$$

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

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