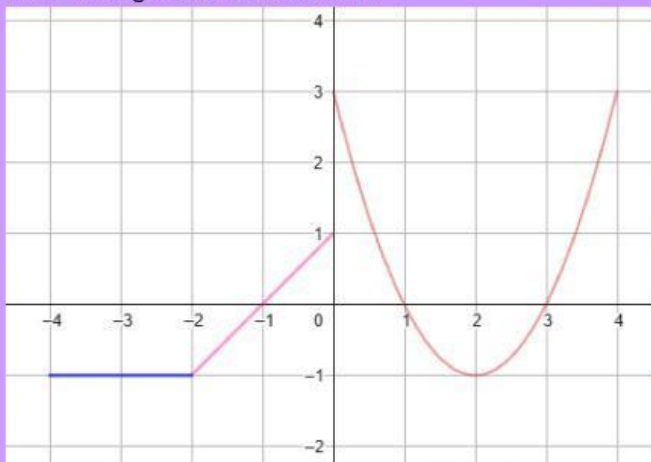


MINI KUIS TIPE B

MATEMATIKA TINGKAT LANJUT – LIMIT

1. Perhatikan gambar di bawah ini !



- | | | |
|-------------------------------------|---|--|
| a. $\lim_{x \rightarrow -2} f(x) =$ | Karena $\lim_{x \rightarrow -2^-} f(x) =$ | dan $\lim_{x \rightarrow -2^+} f(x) =$ |
| b. $\lim_{x \rightarrow -1} f(x) =$ | Karena $\lim_{x \rightarrow -1^-} f(x) =$ | dan $\lim_{x \rightarrow -1^+} f(x) =$ |
| c. $\lim_{x \rightarrow 0} f(x) =$ | Karena $\lim_{x \rightarrow 0^-} f(x) =$ | dan $\lim_{x \rightarrow 0^+} f(x) =$ |
| d. $\lim_{x \rightarrow 1} f(x) =$ | Karena $\lim_{x \rightarrow 1^-} f(x) =$ | dan $\lim_{x \rightarrow 1^+} f(x) =$ |
| e. $\lim_{x \rightarrow 2} f(x) =$ | Karena $\lim_{x \rightarrow 2^-} f(x) =$ | dan $\lim_{x \rightarrow 2^+} f(x) =$ |

2. Tentukan nilai limit dari $\lim_{x \rightarrow -1} \frac{3x+1}{x^2+3x-6}$!

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow -1} \frac{3x+1}{x^2+3x-6} &= \frac{3(\quad) + 1}{(\quad)^2 + 3(\quad) - 6} \\ &= \frac{+1}{+ \quad - 6} \\ &= \text{---} \end{aligned}$$

4. Tentukan nilai limit dari $\lim_{x \rightarrow -3} \frac{x^2+2x-3}{2x^2+5x-3}$!

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow -3} \frac{x^2+2x-3}{2x^2+5x-3} &= \lim_{x \rightarrow -3} \frac{(x-\quad)(x+\quad)}{(x+\quad)(2x-\quad)} \\ &= \lim_{x \rightarrow -3} \frac{(x-\quad)}{(2x-\quad)} \\ &= \frac{\quad}{2(\quad) - \quad} \\ &= \text{---} \end{aligned}$$

3. Tentukan nilai limit dari $\lim_{x \rightarrow -5} \frac{x^2-25}{x^2+3x-10}$

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow -5} \frac{x^2-25}{x^2+3x-10} &= \lim_{x \rightarrow -5} \frac{(x-\quad)(x-5)}{(x-\quad)(x+5)} \\ &= \lim_{x \rightarrow -5} \frac{(x-5)}{(x-\quad)} \\ &= \frac{(-5-5)}{(\quad + \quad)} \\ &= \text{---} \end{aligned}$$

5. Tentukan nilai limit dari $\lim_{x \rightarrow 7} \frac{\sqrt{x+2}-3}{x-7}$!

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow 7} \frac{\sqrt{x+2}-3}{x-7} &= \lim_{x \rightarrow 7} \frac{\sqrt{x+2}-3}{x-7} \times \frac{\sqrt{x+2}+3}{\sqrt{x+2}+3} \\ &= \lim_{x \rightarrow 7} \frac{(\sqrt{x+2}-3)(\sqrt{x+2}+3)}{(x-7)(\sqrt{x+2}+3)} \\ &= \lim_{x \rightarrow 7} \frac{(x-9)}{(x-7)(\sqrt{x+2}+3)} \\ &= \lim_{x \rightarrow 7} \frac{1}{(\sqrt{x+2}+3)} \\ &= \frac{1}{\sqrt{7+2}+3} \\ &= \frac{1}{\sqrt{9}+3} \\ &= \frac{1}{3} \\ &= \text{---} \end{aligned}$$