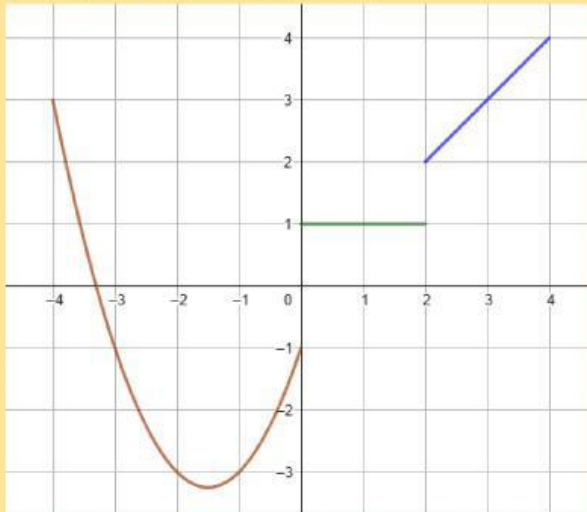


MINI KUIS TIPE B **MATEMATIKA TINGKAT LANJUT – LIMIT**

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 $\lim_{x \rightarrow 1} \frac{2x-1}{x^2+4x-3}$!

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow 1} \frac{2x-1}{x^2+4x-3} &= \frac{2(\quad) - 1}{(\quad)^2 + 4(\quad) - 3} \\ &= \frac{-1}{+ \quad - 3} \\ &= \text{---} \end{aligned}$$

3. Tentukan nilai limit dari $\lim_{x \rightarrow 3} \frac{x^2-9}{x^2+2x-15}$

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow 3} \frac{x^2-9}{x^2+2x-15} &= \lim_{x \rightarrow 3} \frac{(x-\quad)(x-\quad 3)}{(x-\quad)(x+5)} \\ &= \lim_{x \rightarrow 3} \frac{(x-\quad 3)}{(x+\quad)} \\ &= \frac{(3-\quad 3)}{(3+\quad)} \\ &= \text{---} \\ &= \text{---} \end{aligned}$$

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

Penyelesaian :

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

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

Penyelesaian :

$$\begin{aligned} \lim_{x \rightarrow 7} \frac{\sqrt{x-3}-2}{x-7} &= \lim_{x \rightarrow 7} \frac{\sqrt{x-3}-2}{x-7} \times \frac{\sqrt{x-3}+2}{\sqrt{x-3}+2} \\ &= \lim_{x \rightarrow 7} \frac{(x-7)}{(x-7)(\sqrt{x-3}+2)} \\ &= \lim_{x \rightarrow 7} \frac{1}{(\sqrt{x-3}+2)} \\ &= \lim_{x \rightarrow 7} \frac{1}{(\sqrt{7-3}+2)} \\ &= \frac{1}{\sqrt{4}+2} \\ &= \frac{1}{2+2} \\ &= \frac{1}{4} \end{aligned}$$