

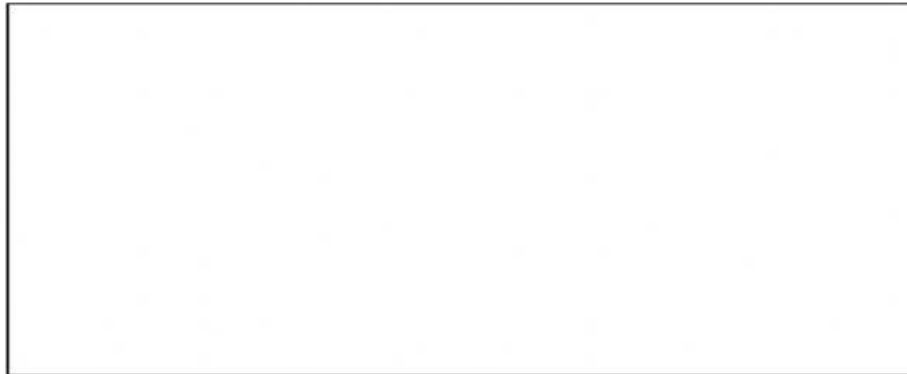
Nama Lengkap :

Kelas :

**LEMBAR KERJA INTERAKTIF
MATEMATIKA PEMINATAN**

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Perhatikan video berikut !



A. Pilihlah Jawaban yang benar

1. $\lim_{x \rightarrow 0} \frac{\cot x}{\cot 2x} = \dots$

- A. 0
- B. $\frac{1}{2}$
- C. $\frac{1}{2}\sqrt{2}$
- D. 1
- E. 2

3. $\lim_{x \rightarrow 0} \frac{1 - \cos 2x}{x \tan \frac{1}{2}x} = \dots$

- A. -4
- B. -2
- C. 1
- D. 2
- E. 4

2. $\lim_{x \rightarrow 0} \frac{\sin(3x - \pi)}{\sqrt{x+8} \tan 2x} = \dots$

- A. $-\frac{3}{2}$
- B. $-\frac{3}{4}$
- C. $-\frac{1}{4}$
- D. $\frac{1}{4}$
- E. $\frac{3}{4}$

4. $\lim_{x \rightarrow 0} \frac{1 - \cos^2 x - \cos x \sin^2 x}{x^4} = \dots$

- A. -1
- B. 0
- C. $\frac{1}{4}$
- D. $\frac{1}{2}$
- E. 1

$$5. \lim_{x \rightarrow 0} \frac{\tan 3x - \tan 3x \cos 2x}{4x^3} = \dots$$

- A. 1
- B. $\frac{3}{2}$
- C. $\frac{5}{4}$
- D. 2
- E. $\frac{5}{2}$

B. Letakkan soal sesuai dengan hasil yang diketahui

$$\lim_{x \rightarrow 0} \frac{\tan^2 \frac{1}{3}x \cot^2 \frac{3}{2}\sqrt{2}x}{x \tan x - \frac{\cos^2 x}{x \sin x}} = \frac{1}{4}$$

$$\lim_{x \rightarrow 0} \left(\frac{x \sin 2x}{1 - \cos x} - \frac{1 - \cos x}{1 - \cos 2x} \right) = 2$$

$$\lim_{x \rightarrow 0} \frac{x \cos 2x}{\tan 2x + \sin 2x} = \frac{1}{2}$$

$$\lim_{x \rightarrow 0} \frac{2x^2 \cot^2 x}{x \csc x} = \frac{9}{2}$$

$$\lim_{x \rightarrow 0} \frac{\tan^2 \frac{1}{3}x \cot^2 \frac{3}{2}\sqrt{2}x}{x \tan x - \frac{\cos^2 x}{x \sin x}}$$

$$\lim_{x \rightarrow 0} \left(\frac{x \sin 2x}{1 - \cos x} - \frac{1 - \cos x}{1 - \cos 2x} \right)$$

$$\lim_{x \rightarrow 0} \frac{x \cos 2x}{\tan 2x + \sin 2x}$$

$$\lim_{x \rightarrow 0} \frac{2x^2 \cot^2 x}{x \csc x}$$

C. Pasangkanlah

$$\lim_{x \rightarrow 0} \frac{\sin x}{\sqrt{1-x} - 1}$$

$$\lim_{x \rightarrow 0} \frac{5x - \sin 4x}{3x + \tan 2x}$$

$$\lim_{x \rightarrow 0} \frac{2x^2 \cot^2 x}{x \csc x}$$

$$\lim_{x \rightarrow 0} \left(\csc x - \frac{2}{x} \tan 2x \right)$$

$$-2$$

$$-\frac{1}{2}$$

$$\frac{1}{5}$$

$$2$$