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Kelas: XII IPA 6

Tugas: Matematika wajib

Jawaban

1. Penye:

$$\lim_{x \rightarrow 0} \frac{\sin 4x}{\tan(-5x)} = \frac{\sin 4}{5}$$

2. Penye:

$$\lim_{x \rightarrow 0} \frac{\sin 7x}{3x - \tan 2x} = \frac{7}{3} = \frac{7}{3}$$

3. Penye:

$$\lim_{x \rightarrow 0} \frac{\sin 4x + \sin 6x}{\sin 2x} = \frac{4 + 6}{2} = \frac{10}{2} = 5$$

4. Penye

$$\lim_{x \rightarrow 1} \frac{(x^2 - 1) \sin 2(x-1)}{-2 \sin^2(x-1)} = \frac{(x^2 - 1) \sin 2(x-1)}{-2 \sin^2(x-1)} = \frac{\sin 2}{-2 \sin}$$
$$\frac{(x-1)(x+1) \sin 2(x-1)}{-2 \sin(x-1) \sin(x-1)} = \frac{1+1}{-2} = -2$$

5. ~~$\frac{\pi}{2}$~~ Penye

$$\lim_{x \rightarrow \frac{\pi}{2}} (\pi - 2x) \tan x = (\pi - 2 \cdot \frac{\pi}{2}) \tan \frac{\pi}{2}$$

$$= (180 - 2 \cdot 60) \tan 60^\circ$$

$$= \tan 60^\circ$$

$$= \sqrt{3}$$

Work hard, dream big.