

TURUNAN FUNGSI $f(x) = \frac{U}{V}$

Tujuan Pembelajaran :

Dengan menggunakan contoh soal yang ditayangkan dari video, peserta didik dapat menurunkan fungsi dalam bentuk $f(x) = \frac{U}{V}$ dengan benar

Silahkan simak tayangan video berikut ini !



LATIHAN SOAL

Soal 1

$$f(x) = \frac{4x}{5 - 3x}$$

$$U = 4x$$

$$U' = \square$$

$$V = (5 - 3x)$$

$$V' = -\square$$

$$f'(x) = \frac{U' \cdot V - V'U}{V^2}$$

$$f'(x) = \frac{\square(5 - 3x) - (-\square)(4x)}{(5 - \square x)^2}$$

$$f'(x) = \frac{\square - \square x + \square x}{(5 - \square x)^2}$$

$$f'(x) = \frac{\square}{(5 - \square x)^2}$$

Soal 2

$$f(x) = \frac{x^2 + 4}{2x - 1}$$

$$U = x^2 + 4$$

$$U' = \square x$$

$$V = 2x - 1$$

$$V' = \square$$

$$f'(x) = \frac{U' \cdot V - V' U}{V^2}$$

$$f'(x) = \frac{\square x(2x - 1) - \square(x^2 + 4)}{(\square x - \square)^2}$$

$$f'(x) = \frac{\square x^2 - \square x - \square x^2 - \square}{(\square x - \square)^2}$$

$$f'(x) = \frac{\square x^2 - \square x - \square}{(\square x - \square)^2}$$

Soal 3

$$f(x) = \frac{2x^2}{4x + 3}$$

$$U = 2x^2$$

$$U' = \square x$$

$$V = (4x + 3)$$

$$V' = \square$$

$$f'(x) = \frac{U' \cdot V - V' U}{V^2}$$

$$f'(x) = \frac{\square x(4x + 3) - \square(2x^2)}{(4x + \square)^2}$$

$$f'(x) = \frac{\square x^2 + \square x - \square x^2}{(4x + \square)^2}$$

$$f'(x) = \frac{\square x^2 + \square x}{(4x + \square)^2}$$