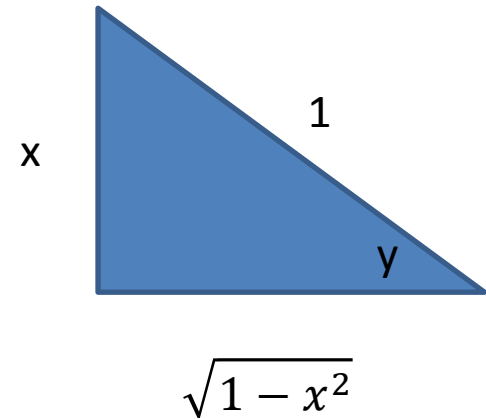


Kalkulus Integral

Integral fungsi balikan trigonometri

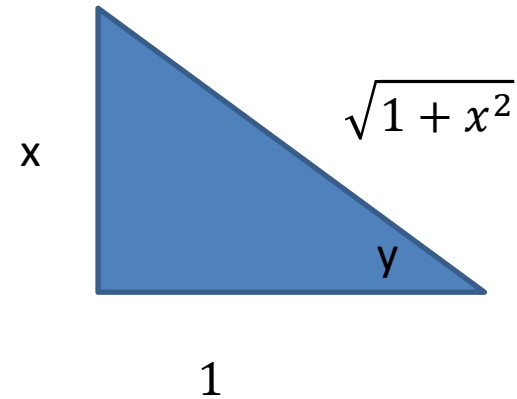
Contoh 1

- $\int \frac{1}{\sqrt{1-x^2}} dx = \dots$
 - dengan $x = \sin y$
 - $dx = \cos y dy$
 - $\cos y = \sqrt{1-x^2}$
-
- $\int \frac{1}{\sqrt{1-x^2}} dx = \int \frac{1}{\cos y} \cos y dy$
 - $= y = \sin^{-1} x$



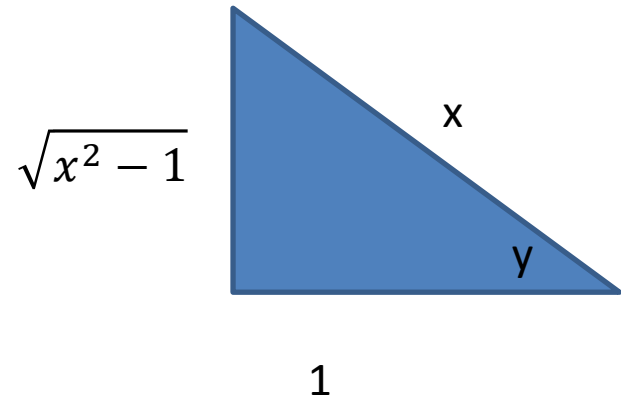
Contoh 2

- $\int \frac{1}{1+x^2} dx = \dots$
- dengan $x = \tan y$
- $dx = \sec^2 y dy$
- $\sec y = \sqrt{1+x^2}$
- $\int \frac{1}{1+x^2} dx = \int \frac{1}{\sec^2 y} \sec^2 y dy$
- $= y = \tan^{-1} x$



Contoh 3

- $\int \frac{1}{x\sqrt{x^2-1}} dx = \dots$
- dengan $x = \sec y$
- $dx = \sec y \tan y dy$
- $\tan y = \sqrt{1 - x^2}$



- $\int \frac{1}{x\sqrt{x^2-1}} dx = \int \frac{1}{\sec y \tan y} \sec y \tan y dy$
- $= y = \sec^{-1} x$

Terima Kasih

Hibah E-learning IDB 2015

rosita_kusumawati@uny.ac.id