



مدونة المناهج السعودية

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الموقع التعليمي لجميع المراحل الدراسية

في المملكة العربية السعودية

تعمیر کے ساتھ
الدوال اکتشافیہ

①

$$y = 3^{\sin x} = 3^{\sin x} \cdot \cos x \cdot \ln 3$$

$$y = \sin^2 x = 2 \sin x \cos x$$

$$y = \sqrt{\sin x} = \frac{\cos x}{2\sqrt{\sin x}}$$

$$y = \frac{1}{\sin x} = (\sin x)^{-1} = -(\sin x)^{-2} \cdot \cos x = \frac{-\cos x}{(\sin x)^2}$$

$$y = \ln \sin x = \frac{\cos x}{\sin x} = \cot x$$

$$y = \ln \cos x = \frac{-\sin x}{\cos x} = -\tan x$$

$$y = e^{\cos x} = -e^{\cos x} \cdot \sin x$$

$$y = \sqrt{\cos x} = \frac{-\sin x}{2\sqrt{\cos x}}$$

$$y = \cos^3 x = -3 \cos^2 x \sin x$$

$$y = 2^{\cos x} = -2^{\cos x} \sin x \ln 2$$

$$y = 5^{\tan x} = 5^{\tan x} \cdot \sec^2 x \cdot \ln 5$$

(2)

$$y = \tan^4 x = 4 \tan^3 x \cdot \sec^2 x$$

$$y = \sqrt{\tan x} = \frac{\sec^2 x}{2\sqrt{\tan x}}$$

$$y = e^{\tan x} = e^{\tan x} \cdot \sec^2 x$$

$$y = \ln \tan x = \frac{\sec^2 x}{\tan x}$$

$$y = \ln \sec x = \frac{\sec x \tan x}{\sec x} = \tan x$$

$$y = e^{\sec x} = e^{\sec x} \cdot \sec x \tan x$$

$$y = \sqrt{\sec x} = \frac{\sec x \tan x}{2\sqrt{\sec x}} = \frac{1}{2} \tan x$$

$$y = \sec^3 x = 3 \sec^2 x \cdot \sec x \tan x = 3 \sec^3 x \tan x$$

$$y = 5^{\sec x} = 5^{\sec x} \cdot \sec x \tan x \ln 5$$

$$y = 5^{\cot x} = -5^{\cot x} \cdot \csc^2 x \ln 5$$

$$y = \cot^3 x = -3 \cot^2 x \csc^2 x$$

$$y = \sqrt{\cot x} = \frac{-\csc^2 x}{2\sqrt{\cot x}}$$

(3)

$$y = e^{\cot x} = -e^{\cot x} \cdot \csc^2 x$$

$$y = \ln(\cot x) = \frac{-\csc^2 x}{\cot x}$$

$$y = \ln(\csc x) = \frac{-\csc x \cot x}{\csc x} = -\cot x$$

$$y = e^{\csc x} = -e^{\csc x} \csc x \cot x$$

$$y = \sqrt{\csc x} = \frac{-\csc x \cot x}{2\sqrt{\csc x}}$$

$$y = \csc^4 x = -4 \csc^3 x \cdot \csc x \cot x = -4 \csc^4 x \cot x$$

$$y = 2^{\csc x} = -2^{\csc x} \csc x \cot x \ln 2$$