

Watch. Practice. Understand. | Lesson 284

Calculus 3.3 Derivatives of Trigonometric Functions

Watch the matching video: <https://www.youtube.com/watch?v=S8PovzmsjLQ>

Practice focus: Trigonometric derivatives

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 Differentiate $y=3\sin x - 2\cos x$.

02 Differentiate $y=\tan x$.

03 Differentiate $y=\sec x$.

04 Find the tangent slope of $y=\sin x$ at $x=\pi/3$.

Worked answers | Lesson 284

Calculus 3 3 Derivatives of Trigonometric Functions

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Practice focus: Trigonometric derivatives

Original extra practice matched to the listed lesson topic.

01 Differentiate $y=3\sin x - 2\cos x$.

$$y'=3\cos x + 2\sin x.$$

02 Differentiate $y=\tan x$.

$$y'=\sec^2 x \text{ where } \tan x \text{ is defined.}$$

03 Differentiate $y=\sec x$.

$$y'=\sec x \tan x \text{ where } \sec x \text{ is defined.}$$

04 Find the tangent slope of $y=\sin x$ at $x=\pi/3$.

$$y'=\cos x; \cos(\pi/3)=1/2.$$