

Math 185 – Quiz #4 Formula Sheet

Derivatives

$$\frac{d}{dx}(\tan u) = \sec^2 u \frac{du}{dx}$$

$$\frac{d}{dx}(\cot u) = -\csc^2 u \frac{du}{dx}$$

$$\frac{d}{dx}(\csc u) = -\csc u \cot u \frac{du}{dx}$$

$$\frac{d}{dx}(\sec u) = \sec u \tan u \frac{du}{dx}$$

Note: of the four derivatives above, you'll only get three, because you'll be asked to derive the fourth one on the quiz, just as in the homework.

$$\frac{d}{dx}(\sin^{-1} u) = \frac{1}{\sqrt{1-u^2}} \frac{du}{dx}$$

$$\frac{d}{dx}(\tan^{-1} u) = \frac{1}{1+u^2} \frac{du}{dx}$$

Sine and Cosine Laws

– you may or may not need these on the quiz, but here they are!

$$c^2 = a^2 + b^2 - 2ab \cos C$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

Derivatives of Exponential and Log Functions:

You'll need to know the derivatives of e^x and $\ln x$. If you need the derivatives for any other bases besides e , we'll give them to you.