MTH 201 -- Calculus
Module 6B: Derivatives of inverse functions

October 14-15, 2020

Agenda for today

- Polling activity over Daily Preparation + Q&A time
- Activity: Practice with derivatives of ln(x), arcsin(x), and arctan(x)
- Q/A + Feedback time

The slope of the tangent line to the graph of $y = \ln(x)$ at the point $(5, \ln(5))$ is

- $1/5$
- e^5
- $1/e^5$
- $\ln(5)$
- $1/\ln(5)$
- Undefined

The derivative of $y = \arctan(x)$ is

$y' = arcsec^2(x)$

$y' = \frac{1}{1+x^2}$

$y' = \frac{1}{\sqrt{1+x^2}}$

$y' = \frac{1}{\sqrt{1-x^2}}$

To 0

Practice with derivatives with ln(x), arctan(x), and arcsin(x) (Jamboard)

The slope of the tangent line to the graph of $y = \arcsin(x)$ when $x = 0$ is

- Exactly 0
- Exactly $\pi/2$
- Undefined
- Exactly 1
- Approximately 1.57