MAT 17A Wnter 2026
Homework 6
Due before 10:00 AM on Wednesday, February 25

Please write the homework solutions in connected sentences and explain your work. Mark the answers to each question. Scan or take pictures of your homework and upload it to Gradescope before due time.

1. (10 points) Find the derivative of $f(x) = (\arcsin(x))^5$.

2. (10 points) When a cold drink is taken from a refrigerator, its temperature is $5^\circ\ C$. After 25 minutes in a $20^\circ\ C$ room its temperature has increased to $10^\circ\ C$. What is the temperature of the drink after 50 minutes?

3. (10 points) Use linear approximation to estimate $\arctan(0.1)$.