MAT 17A Winter 2026
Homework 5
Due before 1:10 PM on Wednesday, February 18

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.

Find the derivatives of the following functions:

1. (10 points)
$$f(x) = \sqrt{\frac{x}{x^2 + 4}}$$

2. (10 points)
$$f(x) = \frac{\ln x}{x^2}$$

3. (10 points) A curve is given by the equation $2x^3 + x^2y - xy^3 = 2$. Use implicit differentiation to find the equation of the tangent line to this curve at the point $(1, 1)$.