MATA36 - Winter 2024 - Written Assignment 1 - Solutions

- **Due:** February 4th, 2024 (by 11:59 PM).
- Submit via the Crowdmark link that was sent to your utoronto email address.
- This assignment pertains to material we covered in class during Weeks 1 to 3.
- For each problem, show all of your work in obtaining the solution.
- It is okay (and encouraged) to collaborate on homework problems related to the course, including discussing written assignments. However, you must write up your own solutions independently. It is considered an academic offense to copy someone else's solution or to allow someone to copy yours.

Problems

1. (5 points) Evaluate $\int \cos(\ln x)\,dx$. Show all of your work.

Solution: We use the substitution rule. Let $w = \ln x$ Then $dw = \dfrac{1}{x}\,dx$, i.e., $dx = x\,dw$. To replace the x in terms of w, we apply the original equation as follows: