> In the space provided, please write your solution to the following exercises. Show all of your work and not just the final conclusion. Remember to use good notation. The majority of the credit you receive will be based on the completeness and the clarity of your responses.

1. (3 points) Let $f(x) = \sinh(\ln x)$. Find $f'(x)$.

2. (a) (4 points) Calculate the derivative with respect to x.

$$x^2 + \sin y = xy^2 + 1$$

(b) (3 points) Find the equation of the line tangent to $x^2 + \sin y = xy^2 + 1$ at the point $(1, 0)$.