

## Miniexam 1 (8 POINTS TOTAL)

MATH 141, SUMMER 2016

NAME:

**Problem 1** Let  $f(x) = e^{2x} - e$ . Find  $(f^{-1})'(0)$ .

- (a) 0
- (b)  $e$
- (c)  $2e$
- (d)  $\frac{e}{2}$
- (e)  $\frac{1}{2e}$

**Problem 2** Differentiate  $\ln(\sin(\ln x))$ .

- (a)  $\frac{1}{x \sin(\ln x)}$
- (b)  $\frac{\cot(\ln x)}{x}$
- (c)  $\cot x + \frac{1}{x \ln x}$
- (d)  $\frac{1}{\sin(\ln x)}$
- (e)  $\cot(\ln x)$

**Problem 3** (i) Evaluate  $\int_0^{\ln 2} e^x \sqrt{e^x - 1} dx$ . (ii) Evaluate  $\int \frac{x}{9+4x^4} dx$ .

**Feedback:**

1. Any comments (on lectures, homework, quizzes, course, me, etc.)?