

You will have twenty minutes to take this quiz. Read the instructions carefully. There are more questions on the back of this page.

1. (4 points) *You do not need to show your work. Only the answer will be graded.*

1. (2 points) Find a value of a so that for all $x < a$ with $x > 2$

$$\frac{1}{\sqrt{x-2}} < \frac{1}{x-2}.$$

2. (2 points) True or false: for all $x > 0$

$$\frac{\sqrt{1+x}}{x} > \frac{1}{\sqrt{x}}.$$

2. (6 points) Show your work. Partial credit may be awarded.

Compute $\int \frac{e^{4x}}{\sqrt{1+e^{8x}}} dx$.