MATH 202, Spring 2024 **Name:** _____

In class work 13 **Row and Seat**: _____

In class work **13** has questions **1** through **1** with a total of **8** points.

"When you're good to others, you're best to yourself." BENJAMIN FRANKLIN

1. Find the numeric value of each improper integral.

2 (a) $\int_0^\infty \sin(\pi x)\,dx$

2 (b) $\int_0^\infty \frac{1}{x\sqrt{1+x^2}}\,dx$. **Hint:** Try a substitution $x = 1/z$.

2 (c) $\int_1^\infty \frac{1}{x^{\frac{11}{10}}}\,\mathrm{d}x.$

2 (d) $\int_1^\infty \frac{1}{x^{\frac{9}{10}}}\,\mathrm{d}x.$