1. Calculate \( \frac{d}{dx} \arcsin\left(\frac{x}{4}\right) \) and simplify as much as you can.

2. Evaluate \( \int_1^3 \frac{1}{1 + 9x^2} \, dx \)

3. Determine if the following improper integral is convergent or divergent. If convergent, give its value. \( \int_1^\infty \frac{1}{x^3} \, dx \).

Self evaluation: (Circle) Rate your level of understanding of the material on the quiz:

Mastery  Tentative  Unsure