

**WRITE YOUR NAME:**

MAC 2241 Homework 4

Due in class, Friday February 24th

You can use more paper if necessary, but please STAPLE

**Question 1.** Evaluate the limit, if it exists.

$$\lim_{x \rightarrow -4} \frac{\sqrt{x^2 + 9} - 5}{x + 4}$$

**Question 2.** Evaluate the limit, if it exists.

$$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x^2}$$

**Question 3.** Evaluate the limit, if it exists.

$$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x}$$

**Question 4.** Evaluate the limit, if it exists.

$$\lim_{x \rightarrow 0} \frac{\sin x}{x^2}$$