

WRITE YOUR NAME:

MAC 2233 Homework 1

Due in class, Friday January 19th

You can use more paper if necessary, but please STAPLE

Question 1. Factor the following completely.

$$2y^6 - 32y^2$$

Question 2. If $f(x) = x^2$, evaluate and simplify each of the following.

- $f(1.3)$
- $f(1 + h)$
- $f(1.003)$
- $f(3.001) - f(3)$

Question 3. Evaluate the limit.

$$\lim_{x \rightarrow 9} \frac{3 - \sqrt{x}}{9 - x}$$

Question 4. Evaluate the limit.

$$\lim_{x \rightarrow \infty} \frac{x + 3}{x^2 + 9}$$

Question 5. Evaluate the limit.

$$\lim_{x \rightarrow \infty} \frac{6x^2 + 5}{3x^2 + \sqrt{x}}$$