

Name: \_\_\_\_\_

Section: \_\_\_\_\_

**MATH 120A**

**QUIZ 1**

April 10, 2003

You may use a calculator to complete this quiz. No notes please. Show all work.

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1. (4 points) Let  $f(x) = 2x^2 - 5$ . Compute and simplify the expression

$$\frac{f(x+h) - f(x)}{h}.$$

(over)

2. (6 points) Let  $C$  be the circle centered at the origin with radius 6. Let  $\ell$  be the line with slope  $\frac{1}{4}$  that passes through the points  $(-8, -8)$  and  $(a, 0)$ , for some real number  $a$ .

(a) Find the value of the number  $a$ .

(b) Find the coordinates of the two points where  $\ell$  and  $C$  intersect.