

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

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

**MATH 120A**

**QUIZ 6**

February 28, 2002

You may use a scientific calculator to complete this quiz. No notes please.

1. (5 points) Soon after compact disc technology was introduced, CD sales grew exponentially. The number of CDs purchased during the year,  $t$  years after 1985, is given by

$$N(t) = 7.5 \cdot 6^{0.5t},$$

where  $N(t)$  is in millions of CDs. (So,  $t = 0$  corresponds with the year 1985.)

- (a) According to this model, how many CDs were purchased in 1990?

- (b) Rewrite the formula  $N(t) = 7.5 \cdot 6^{0.5t}$  as an exponential function in standard form ( $N(t) = A_0 \cdot b^t$ ).

2. Sketch the graph of  $y = -2 \cdot 3^{x+4}$ . Clearly label at least 3 points on your graph. Can you include the  $y$ -intercept on your graph?

