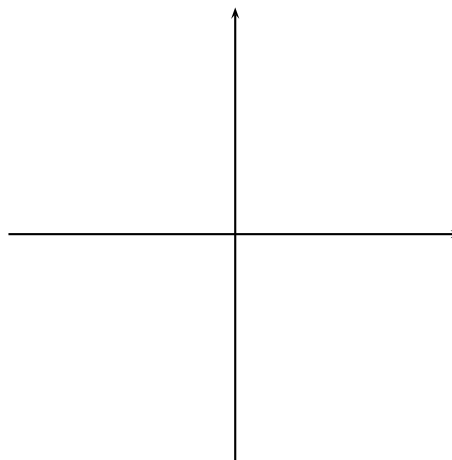


MA 120-12 §2.3 – 2.5	Quiz #2	score	Name: _____ 4 June 2002
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1. A mutual fund currently has a net asset value of \$20 per share. Its value per share has been increasing recently at a rate of \$0.10 per day. Let $f(t)$ denote the value per share t days from now. Express the information given in this problem in terms of f and f' . Then assume the growth rate remains constant and estimate $f(14)$. (5 points)

2. Sketch a graph of a continuous function f with the the following properties: (5 points)

- (a) $f'(x) > 0$ on $[-3, 1]$
- (b) $f'(x) < 0$ on $[1, 3]$
- (c) $f''(x) < 0$ on $[-3, 2]$
- (d) $f''(x) > 0$ on $[2, 3]$
- (e) $f(0) = 2$



3. Let $f(t)$ denote the value of a stock at time t . Explain in terms of f' and f'' what it means if “the value of the stock has been falling lately but is beginning to level off.” (5 points)

4. Let $MC(q)$ and $MR(q)$ denote the marginal cost and marginal revenue functions, respectively, where q is the quantity of items produced. If $C(100) < R(100)$ and $MC(100) > MR(100)$, how would you want to change q in order to increase your profit? Explain. (5 points)