

Math 194, Spring 2024

Homework 1 — Due Wednesday, April 17

1. On April 1, 2024, a European call option on Apple (AAPL) has a price of \$20. The option expires on April 19, and the strike price is \$150. The price of Apple stock on April 1 is \$170 per share.

Analyze this situation in the manner of the Example on page 3 of the text, considering two possible scenarios: (1) The price of Apple on April 19 is \$180; (2) The price of Apple on April 19 is \$140. In each case compute the profit (or loss) incurred as a percentage of the investment if one were to invest \$2000 in (a) the call option on 100 shares of Apple, or (b) Apple stock. (Assume that only whole shares of AAPL can be purchased. Thus \$1000 would buy 5 shares of AAPL on April 1, with \$150 left over; in this case \$850 was actually invested.)

2. Exercise 1, Section 2.4 (page 28 of the text).

3. Exercise 2, Section 2.4 (page 28 of the text). (Don't do part (d).)

4. Exercise 4, Section 2.4 (page 29 of the text).