1. A forward contract is an agreement to buy or sell an asset at a certain future time for a certain price (called the forward price). At the time a forward contract is entered into by two parties, no money changes hands. The investor who agrees to buy the asset at the future time is said to hold the long position in the contract and the investor who agrees to sell the asset is said to hold the short position in the contract. Suppose that a stock is currently selling for $30 per share. A (long position in a) forward contract is available to buy 100 shares of the stock 3 months from now for $30.25 per share. Suppose that a bank is offering interest at the rate of 5% per annum (compounded continuously) on a 3-month deposit. Describe a strategy for creating an arbitrage profit and compute the amount of the profit.

2. On February 4, 2020, a European call option on Apple (AAPL) has a price of $30. The option expires on February 21 (the third Friday of February), and the strike price is $300. The price of Apple stock on February 4 is $320 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 February 21 is $360; (2) The price of Apple on February 21 is $280. In each case compute the profit (or loss) incurred as a percentage of the investment if one were to invest $3000 in (a) the call option on 100 shares of Apple, or (b) Apple stock.