Problem 2.1. (1 pt) Source: Problem 1.3.c. from McDonald.
ABC stock has a bid price of $40.95 and an ask price of $41.05. Assume there is a $20 brokerage commission. Suppose that you buy 100 shares, then immediately sell the 100 shares with the bid and ask prices being as above. What is your round-trip transaction cost?
(a) About $12.50 gain
(b) About $50.00 gain
(c) About $50.00 loss
(d) About $12.50 loss
(e) None of the above

Problem 2.2. (1 pt) Assume that you open a 100 share short position in Jiffy, Inc. common stock at the bid-ask price of $32.00-$32.50. When you close your position the bid-ask prices are $32.50-$33.00. If you pay a commission rate of 0.5%, calculate your profit or loss on the short investment (assume \( r = 0 \))?
(a) About $32.50 gain
(b) About $16.25 loss
(c) About $132.50 loss
(d) About $100 gain
(e) None of the above

Problem 2.3. (1 pt) Assume that you open a 300−share short position in XYZ common stock at $30.19 with commission of 0.5%. When you close your position the stock price is $29.87 and you have to pay a commission rate of 0.5%. Calculate your profit or loss on this short investment (assume \( r = 0 \))?
(a) About $12.50 gain
(b) About $5.91 gain
(c) About $5.91 loss
(d) About $12.50 loss
(e) None of the above

Problem 2.4. (3 points) Source: Example 7.4.3 from the Daniel/Vaaler.
On April 1, Roger initiates a short sale for 400 shares of stock \( S \). At that time the price of a share of stock is $43.13. He closes his short position exactly two years later. To do this, he has to purchase back the shares of stock at the, then current, price of $38.95 per share.
Assume that the initial margin requirement is 55% and that there are no intermediate margin deposits except for quarterly withdrawals of $0.36 per share to cover the discrete dividend payments. The annual effective interest rate earned by the margin deposit is 2.82%.
Find Roger’s annual yield rate for the above investment.

Problem 2.5. (3 points) Source: Example 7.1.1 from the Daniel/Vaaler.
At the beginning of a quarter, Roger’s aunt Agatha buys 100 shares of preferred stock \( S \) at a price to provide her a yield of 5.5% assuming that all the dividends are paid. The stock \( S \) is nonadjustable and nonparticipating which implies that the dividend schedule which was in force at the time of purchase cannot be altered. So, the dividends are fixed at the times and levels that are stipulated at issuance, namely $0.36 per share each quarter.
What is the fair price that aunt Agatha should pay per share of stock?