1. (Like 15.1) Gaucho Inc. and Triton Corp. are identical in every way except for their capital structures. They have the same operating cash flows. Neither firm pays taxes, and taxes on investors are ignored. Bankruptcy is not in the picture. Gaucho is an all-equity firm with equity valued at $4 million. Triton Corp. uses leverage in its capital structure. Its debt has a market value of $1.5 million. Investors can borrow or lend money at the same rate as Triton can. Explain why Triton has the same asset value as Gaucho by answering the following questions?

a. Suppose that the market value of Triton equity is $3 million. Describe the homemade leverage that permits the investor to get the same returns as Triton more cheaply by buying stock in Gaucho and making one additional transaction.

b. Suppose that the market value of Triton equity is $2 million. Describe the homemade leverage that permits the investor to get the same returns as Gaucho more cheaply by buying stock in Triton and making one additional transaction.

c. In the situation of part b, describe a profitable riskless arbitrage.

d. Given that the market value of Triton is $4 million, what is the value of the equity of Triton? ________________ 
What is Triton’s debt-equity ratio? ________________________

2. (Like 14.4 of the text) The shareholders of Wyoming Anchovies need to elect 13 members to the board of directors. What fraction of the shares of is needed to assure the election of at least one director under cumulative voting? Explain. Why might it be possible to elect one director with even fewer shares?
3. (Similar to items 15.12-15.15.) An all-equity firm is subject to a 34 percent corporate tax rate. The firm’s initial market value is $15,000,000 and there are 3,000,000 shares outstanding. The firm issues $3,000,000 worth of bonds using the proceeds to repurchase its common stock. The firm is in no danger of financial distress and only corporate taxes are considered. By the Modigliani-Miller theory, show that the new market value of the firm is $16,020,000 and the new value of the equity is $13,020,000. Explain briefly.

The equity holders require a 20 percent rate of return on the all-equity firm. The bond rate is 10 percent. What rate of return do they require on the levered firm? (Hint: Modigliani-Miller II with taxes)