1. During 2004, XYZ corp. reported earnings per share of $5.20 and paid dividends of $4.60. The firm’s return on equity during the past year was 18%, but you expect it to decrease to 17% in the coming year. What is the expected growth in EPS next year?

\[
Payout\ Ratio = \frac{4.6}{5.2} = 0.88462 \\
Retention\ Ratio = 1 - 0.88462 = 0.44538 = 11.54\% \\
g_t = (Retention\ Ratio \times ROE_t) + \left( \frac{ROE_t - ROE_{t-1}}{ROE_{t-1}} \right) = (0.11538)(0.17) + \left( \frac{0.17 - 0.18}{0.18} \right) = -3.595\% 
\]

2. You are valuing a firm and have assumed growth in operating income of 12% per year. You forecast the firm’s after-tax operating income in the coming year at $320 million. In addition, you expect the firm’s return on capital to remain constant at 13%. Estimate the dollar amount of reinvestment that will be required in the coming year in order to support your growth assumption going forward.

\[
g = Reinvestment\ Rate \times ROC, \ \text{Rearranging gives:} \\
Reinvestment\ Rate = \frac{g}{ROC} = \frac{0.12}{0.13} = 0.92308 \\
\text{\$ Reinvestment} = 0.92308(320\ mil) = $295.385\ million 
\]
You are trying to estimate the growth in net income for a mid-cap retail firm. The firm’s book value of equity at the beginning of the year was $500 million and the reported net income for the year was $200 million. The firm also reported capital expenditures of $175 million, depreciation of $90 million, a decrease in working capital of $30 million, and a debt-to-capital ratio of 35%.

a) Estimate the equity reinvestment rate for the firm and the expected growth in net income.

\[
ROE = \frac{200}{500} = 40\%
\]

\[
Reinvestment\ Rate = \frac{(175 - 90 - 30)(1 - .35)}{200} = \frac{35.75}{200} = 17.875\% 
\]

\[
g = Reinvestment\ Rate \times ROE = (.17875)(.40) = 7.15\%
\]

b) Estimate the Free Cash Flow to Equity for this firm.

\[
FCFE = 200
\]

\[-(175 - 90)(1 - .35)
\]

\[-(-30)(1 - .35)
\]

\[= \$164.25\ million
\]