Selected Ratios and Definitions

Current Ratio = Current Assets / Current Liabilities;
Quick Ratio = (Current Assets - Inventory) / Current Liabilities;
Debt-to-Asset Ratio = Total Debt / Total Assets;
Debt-to-Equity = Total Debt / Total Equity;
Equity Multiplier = Total Assets / Total Equity;
Times Interest Earned = EBIT / Interest Payment;
Inventory Turnover = COGS / Inventory; or, Sales/Average Inventory if COGS data is not available;
Average Age of Inventory = 365 / Inventory Turnover = 365 / (Sales / Inventory);
Receivables Turnover = Annual Sales / Accounts Receivables;
Average Collection Period = 365 / Receivables Turnover = 365 / (Sales / Accounts Receivables);
Total Assets Turnover = Sales / Total Assets;
Net Profit Margin = Net Income / Sales;
ROA = Net Income / Total Assets = total asset turnover * net profit margin;
ROE = Net Income / Equity = ROA * Equity Multiplier = ROA * Total Assets / Equity;
ROE = total asset turnover * net profit margin * equity multiplier;

EPS = Net Income / Number of Common Shares Outstanding;
P/E Ratio = Market Price per Share / EPS;
Market-to-Book Ratio = Market Price per Share / Book Value per Share;
Dividend Payout Ratio (DPR) = Dividends / Net Income;
Retention Ratio = 1 - Dividend Payout Ratio;

Net Cash Flow = Net Income + Depreciation;
Operating Cash Flow (OCF) = Earnings before Interest and Taxes + Depreciation - Tax;

Dividend Yield = Dividend per Share / Stock Price = D_1 / P_0
Capital Gains = (Price Next Period / Price today) – 1 = (P_1 / P_0) – 1
Holding Period Return: HPR = D_1/P_0 + (P_1/P_0 -1)
Value of a perpetuity: P = D / k where D is the perpetual cash flow and k is the discount rate
Constant Growth Model: P_0 = D_1 / (k - g) where D_1 is the dividend next period, k is the discount rate and g is the growth rate in dividend.
Bond Valuation Formula: P_0 = PV of Coupon Annuity + PV of Face Value (Par) of Bond.

Single Cash Flow Present Value Formula: PV_0 = CF_i / (1 + r)^i
Single Cash Flow Future Value Formula: FV_t = CF_0 * (1 + r)^t
Present Value of an Annuity: PV_t = \frac{PMT}{r} \left[ 1 - \frac{1}{(1+r)^N} \right]
Future Value of an Annuity: FV_t = \frac{PMT}{r} \left[ (1+r)^N - 1 \right]
Security Market Line, SML or CAPM formula: r_i = r_{RF} + \beta_i \times (r_M - r_{RF})

Calculator Use
- Use of a calculator is recommended.
- Students are allowed to use HP-10B; TI-BA II; or any four function calculators
- Students are not allowed to use any other calculators including
  - Graphing or Programmable calculators
  - iPhones with HP-10B or other emulators