Go 2012

Key to 1:15 a

Problems

5. a. $\beta_{MT} = \frac{Cov(R_{MT}, R_{S\&P})}{Var(R_{S\&P})}$

$Cov(R_{MT}, R_{S\&P}) = \frac{1}{3}((60 - \bar{R}_{MT})(14 - \bar{R}_{S\&P}) + (64 - \bar{R}_{MT})(16 - \bar{R}_{S\&P}) + (43 - \bar{R}_{MT})(3 - \bar{R}_{S\&P}) + (-4 - \bar{R}_{MT})(-20 - \bar{R}_{S\&P}))$ (25)

$\bar{R}_{MT} = \frac{1}{4}(60 + 64 + 43 - 4)$ (6)

$\bar{R}_{S\&P} = \frac{1}{4}(14 + 16 + 3 - 20)$ (10)

$Var(R_{S\&P}) = \frac{1}{3}((14 - \bar{R}_{S\&P})^2 + (16 - \bar{R}_{S\&P})^2 + (3 - \bar{R}_{S\&P})^2 + (-20 - \bar{R}_{S\&P})^2)$ (13)

b. $\beta_A = \left(\frac{100}{120}\right)\beta_{MT} + \left(\frac{20}{120}\right)0.3$ (14)