**Problem 1**

a. Return on capital = 150/1000 = 15%  
   Reinvestment rate = 33.33% (g/ROC); you cannot grow without reinvesting  
   Value of operating assets = $2,100.00  
   = 150 * (1-.33) * 1.05 / (.10 - .05) = 2100

b. Value of Powloon  
   Return on capital = 40/400 = 10.00%  
   Reinvestment rate = 30.00%  
   Value of Powloon Steel = $480.67  
   Value of 25% share = $120.17

c. Value  
   Value of operating assets = $2,100.00  
   + Value of Minority Holding = $120.17  
   + Cash $100.00  
   - Debt $250.00  
   Value of Equity in common stock = $2,070.17  
   value per share = $20.70

**Problem 2**

Market value of equity = $1,200.00  
Book value of equity = $800.00  
Return on Equity = 12.50%  
Cost of equity = 10%  
Price to Book ratio = 1.5  
1.50 = (.125-g)/(.10-g)  
Solving for g, Growth rate = 5%  
If you use the long equation with (1+g) in the numerator, g = 4.3%

**Problem 3**

Enterprise value = MV of equity + Debt - Cash = 1200 + 300 - 150 = 1350  
EBITDA = 70/(1-.3) + 50 = 150  
EV/EBITDA = 1350/150 = 9  
9 = 5.62 - 3.5 (.3) + 31.5 (ROC)  
Solving for ROC,  
ROC = 14%  
ROC = .14 = 70/X  
Capital invested = 500