Quiz 1: Valuation

Answer all questions and show necessary work. Please be brief. This is an open book, open notes exam.

1. Lenox Inc., a US-based oil services company, is considering investing in a 4-year project in Nigeria, funded with 400 million Nigerian Naira in debt, which will be paid down over the four-year life. You have the following forecasted cashflows (in Nigerian Naira):

	1	2	3	4
Net Income	₦ 400.00	₦ 480.00	₦ 576.00	₦ 691.20
+ Depreciation	₦ 50.00	₦ 60.00	₦ 72.00	₦ 86.40
- Capital Expenditures	₦ 80.00	₦ 96.00	₦ 115.20	₦ 138.24
- Chg in Working Capital	₦ 20.00	₦ 24.00	₦ 28.80	₦ 34.56
- Debt repaid	₦ 100.00	₦ 100.00	₦ 100.00	₦ 100.00
Cash Flow	**₦ 250.00**	**₦ 320.00**	**₦ 404.00**	**504.80**

For its US projects, Lenox uses a cost of equity of 8% and a cost of capital of 6%, but it believes that the country risk in Nigeria supports an additional risk premium of 5%. If the inflation rate in Nigeria is 10% and the inflation rate in the US $ is 2%, what is the present value of these cash flows? (3 points)

2. Tejos Inc. is a Hungary-based company that operates in two countries, Germany and Hungary, and in two businesses, apparel and retail. You have collected the following information on revenues in each country and business (in millions of Forint):

	Hungary	*Germany*	***Total***	*EV/Sales*	*Unlevered Beta*
Apparel	900 Ft	100 Ft	1,000 Ft	2.00	0.80
Retail	600 Ft	400 Ft	1,000 Ft	1.50	1.20
Total	1,500 Ft	500 Ft	2,000 Ft		
Govt Bond Rate (Euros)	2.00%	1.00%			
Govt Bond Rate (Forint)	4.50%	NA			

a. Assuming that the local currency default spread for Hungary is equal to its default spread in Euros, estimate the risk free rate in Hungarian Forint. (1 point)

b. The ERP for Germany (and other mature markets) is 6%. If equity markets in Hungary are 1.2 times more risky than Hungarian bonds, estimate the equity risk premium for Tejos Inc. (2 points)

c. Assuming that Tejos has a debt to equity ratio of 25% and faces a marginal tax rate of 20%, estimate the beta for the company. (2 points)

3. Malia Inc. is a retail company that reported an operating loss of $75 million in the most recent twelve months, but this loss was after an operating lease payment of $125 million during the period. There are three more years left on the lease, with the following payments coming due each year:

Year	*Lease Commitments (in millions*
1	$125.00
2	$100.00
3	$75.00

You believe that the contractual commitment should be treated as debt, and that the pre-tax cost of debt for Malia Inc is 5%. If you capitalize these commitments, estimate the corrected operating income or loss for the most recent twelve months. (2 points)