Spring 2017 Name:

Quiz 2: Valuation

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

1. You are reviewing the cash flows forecasts for Cravath Inc., a publicly traded steel company, for the next three years:

	1	2	3
Expected growth rate in EBIT (1-t)	10%	10%	10%
EBIT (1-t)	$50.00	$55.00	$60.50
- Reinvestment	$40.00	$44.00	$48.40
FCFF	$10.00	$11.00	$12.10
Cost of capital	12%	12%	12%

Cravath's return on capital is expected to remain unchanged at its current level in perpetuity and its cost of capital is expected to drop to 7.5% after year 3.

a. If the expected growth rate in after-tax operating income (EBIT(1-t)), after year 3 is expected to be 2.5%, **estimate the terminal value for Cravath (at the end of year 3).** (2 points)

b. Estimate the present value (today) of just the terminal value . (Don't just show a number. Show your discounting details.) (1 point)

2. Nova Inc. is a publicly traded company that has two cross holdings, a 10% ownership of Longo Inc. , which is recorded as a minority holding and a 60% stake in Sinclair Enterprises, which is fully consolidated. You have been given the following information on the three companies (with values in millions):

	Nova (Consolidated)	Longo	Sinclair
FCFF ($ millions) next year	$75.00	$24.00	$45.00
Cost of capital	10.00%	8%	12%
Expected growth rate	2.50%	2%	3%
Cash ($ millions)	$100.00	$50.00	$25.00
Debt($ millions)	$300.00	$-	$125.00
# Shares (millions)	100	50	80

Estimate the **value per share in Nova Inc**. (4 points)

3. Carrion Inc. is an engineering company that is very exposed to economic cycles. In the most recent year, it had an operating loss of $50 million, its book value of equity is $250 million and its book value of debt is $750 million; it has no cash. It's prospects for next year are dependent on the overall economy:

    a. If the economy improves, Carrion expects to generate $120 million in after-tax operating income next year and grow 3% a year in perpetuity; its return on capital will stabilize at next year's level and its cost of capital is 9%.
    b. If the economy stays depressed, Carrion will be forced into default. Its assets will be sold for 90% of book value and it will have to pay off all its debt outstanding.

    If the probability of the economy improving is 80% and the staying depressed is 20%, and Carrion's cost of capital is 9%, estimate the value of equity in Carrion. (3 points)