Session 9A: Post class test solutions

1. **d. $20 million.** Include all acquisitions, whether paid for with cash or stock in cap ex. Net cap ex = 80 + 100 -60 = 120
2. **d. Decreased cash flow by $40 million.** Compute the non-cash working capital for each year:
    - Non-cash WC = WC – Cash + ST Debt
    - Non-cash WC last year = 100 – 30 +15 = 85
    - Non-cash WC this year = 120 -20 + 25 = 125
    - Change in non-cash WC = 125 – 85 = +40 (Decreases CF)
3. **a. $13 million.** To compute the FCFF, first compute the non-cash working capital in both dollar terms and as a percent of revenues:
    - Non-cash WC = 40 -50 = -10
    - Non-cash WC as percent of revenues = -10/100 = -10%
    - Expected revenues next year = $110 million
    - Expected non-cash WC = -$11 million
    - Change in WC = -10-(-11) = 1

    FCFF = 20 (1.10) - $10 +1 = $13 million
4. **c. $28 million**. To get from FCFF to FCFE, you subtract out the after-tax interest expense and the net debt change (if debt increases, it is a cash inflow whereas a debt decrease is cash outflow).
    - FCFF – Interest expense (1-t) + Change in Debt = FCFE
    - 50 – 10 (1-.30) -15 = $28 million
5. **b. 14.87%**. To compute the geometric average growth rate, you just need the starting and ending numbers:
    Geometric average = (180/90)^(1/5)-1 = 0.1487 or 14.87%
    The arithmetic average annual growth rate is 21.25%.

Year	Earnings (in millions)	Growth rate
Current	$180.00	80.00%
Year -1	$100.00	-33.33%
Year -2	$150.00	30.43%
Year -3	$115.00	-4.17%
Year -4	$120.00	33.33%
Year -5	$90.00	
Arithmetic average		21.25%