

Session 8: 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%