

Session 5A: Post class test solutions

Year	R&D expense	Unamortized portion	Amortization this year
LTM	\$26,018	\$ 26,018.00	\$ -
Year -1	\$21,419	\$ 14,279.33	\$ 7,139.67
Year -2	\$16,625	\$ 5,541.67	\$ 5,541.67
Year -3	\$13,948	\$ -	\$ 4,649.33
		\$ 45,839.00	\$ 17,330.67

1. **Effect on operating income** = Add back the R&D expense from the last 12 months and subtract out amortization of R&D = $+\$26,018 - \$17,331 = \$8,687$ million
2. **Effect on book value of equity** = Add back the unamortized portion of R&D = $+\$45,839$ million

Year	Lease commitment	PV at 3%
1	\$333.00	\$323.30
2	\$353.00	\$332.74
3	\$327.00	\$299.25
4	\$300.00	\$266.55
5	\$252.00	\$217.38
Yrs 6-10	\$227.20	\$897.55
Sum of PV of lease commitments		\$2,336.76

3. **Effect on debt** = Increase by PV of lease commitments = $+\$2,337$ million
4. **Effect on operating income** = Add back the lease expense from the last 12 months and subtract out depreciation of leased asset = $+374$ million - $\$2337/10 = +\140 million. (The depreciation should be based upon the value of the leased asset last year, but given that the lease commitment did not change much, I am assuming it was similar in value to this year's number.)
5. **Effect on interest expense** = PV of lease commitments * Pre-tax cost of debt = $\$2,337$ million * $.03 = \$70.10$ million