

If you get the correct output for the practice problem (see below) you should have some confidence that your template is set up with the correct cell formulas. Then if you enter the correct figures in input value cells B4 to B20 (read the assignment!), your completed Excel® output should be ready to submit.

A	B	C	D	E	F	G	H
1 FIL 260 Spreadsheet Homework Problem 3: Real Estate Investment (this output is for the practice input values, not the ones to submit)							
2 Student Name							
3							
4 Total Property Purchase Price	\$9,100,000		Owner's Equity Investment (Purchase Price - Loan)			\$2,700,000	
5 Land Value	\$1,950,000						
6 Depreciable Life in Years (Rental Residential)	27.5		Depreciable Basis (Purchase Price - Land Value)			\$7,150,000	
7 Amount Borrowed on Loan	\$6,400,000		Depreciation in Yr. 2, 3, or 4 ((Purch Price - Land Value)/Life)			\$260,000	
8 Loan Amortization Period in Years	25		Depreciation Yr. 1 or 5 (11.5/12 of Yr. 2 - 4 value)			\$249,167	
9 Annual Stated (APR) Interest Rate on Loan	7.80%						
10 Initial Monthly Rent per Unit	\$1,720		Three years of depreciation, years 2 - 4			\$780,000	
11 Number of Units	48		Two years of depreciation, years 1 & 5			\$498,333	
12 Expected Annual Rent Percentage Increase	3.00%		Total depreciation claimed (recaptured under Sec. 1250)			\$1,278,333	
13 Expected Annual Vacancy/Uncollectible Percentage	5.00%		Remaining book value at end of yr 5 (Purch Pr - Tot Depr):			\$7,821,667	
14 Operating Expense Percentage	33.00%						
15 Expected Resale Price	\$11,300,000		Initial Annual Rent (monthly rent x 12 x # units)			\$990,720	
16 Expected Selling Expense Percentage	6.00%						
17 Investor's Required Return on Equity	10.50%		Loan Amortization Period in Months (# years x 12)			300	
18 Investor's Ordinary Income Tax Rate	34.00%		Monthly Interest Rate on Loan (annual rate ÷ 12)			0.0065	
19 Ordinary Capital Gain Tax Rate	15.00%		Monthly Loan Payment (from loan payment formula)			\$48,551	
20 Section 1250 Depreciation Recapture Tax Rate	25.00%		Annual Loan Payment Total (monthly payment x 12)			\$582,616	
21							
22 Net Present Value (as computed below)	\$241,698		Investment is acceptable since NPV is \$0 or greater				
23 Internal Rate of Return (as computed below)	12.53%		Investment is acceptable since IRR is equal to or greater than required annual return				
24							
25 Loan to Value Ratio (L/V)	0.70		Initial Year's Debt Coverage Ratio (DCR)	1.08			
26							
27 LOAN AMORTIZATION INFORMATION			Initial	Ending	Year's		
28			Principal	Principal	Total		
29		Year	Month	Owed	Payment	Principal	Interest
30		0	0	\$6,400,000			
31		1	12	\$6,313,536	\$582,616	\$86,464	\$496,152
32		2	24	\$6,313,536	\$582,616	\$93,454	\$489,162
33		3	36	\$6,220,082	\$582,616	\$101,010	\$481,606
34		4	48	\$6,119,073	\$582,616	\$109,176	\$473,439
35		5	60	\$6,009,896	\$582,616	\$118,003	\$464,612
36							
37 CAPITAL GAIN TAX			AFTER-TAX EQUITY REVERSION				
38 Gross Selling Price	\$11,300,000		Gross Selling Price			\$11,300,000	
39 Minus Selling expense	\$678,000		Minus Selling Expense			\$678,000	
40 Equals Net Selling Price	\$10,622,000		Equals Net Selling Price			\$10,622,000	
41 Minus Remaining Book Value	\$7,821,667		Minus Loan Payoff (see above)			\$5,891,893	
42 Equals Capital Gain	\$2,800,333		Equals Before-Tax Equity Reversion			\$4,730,107	
43 Minus Section 1250 Depreciation Recapture	\$1,278,333		Minus Capital Gain Tax			\$547,883	
44 Ordinary Capital Gain	\$1,522,000		Equals After-Tax Equity Reversion			\$4,182,224	
45							
46 Tax on Section 1250 Depreciation Recapture	\$319,583						
47 Tax on Ordinary Capital Gain	\$228,300						
48 Total Tax on Capital Gain	\$547,883						
49							
50 CASH FLOW COMPUTATION	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
51 Potential Gross Income (PGI)	\$990,720	\$1,020,442	\$1,051,055	\$1,082,586	\$1,115,064		
52 Minus Losses from Vacancy and Uncollectibles	\$49,536	\$51,022	\$52,553	\$54,129	\$55,753		
53 Equals Effective Gross Income (EGI)	\$941,184	\$969,420	\$998,502	\$1,028,457	\$1,059,311		
54 Minus Operating Expenses	\$310,591	\$319,908	\$329,506	\$339,391	\$349,573		
55 Equals Net Operating Income (NOI)	\$630,593	\$649,511	\$668,996	\$689,066	\$709,738		
56 Minus Debt Service (see above)	\$582,616	\$582,616	\$582,616	\$582,616	\$582,616		
57 Equals Before Tax Cash Flow to Equity (BTCF)	\$47,977	\$66,895	\$86,381	\$106,450	\$127,122		
58 Minus Income Tax (see below)	-\$39,007	-\$33,881	-\$24,687	-\$15,087	-\$1,374		
59 Equals After Tax Cash Flow to Equity (ATCF)	\$86,984	\$100,776	\$111,068	\$121,537	\$128,496		
60							
61 Amount (Paid)/Received from Transaction	(\$2,700,000)					\$4,182,224	
62							
63 INCOME TAX COMPUTATION							
64 Net Operating Income	\$630,593	\$649,511	\$668,996	\$689,066	\$709,738		
65 Minus Interest Expense (see above)	\$496,152	\$489,162	\$481,606	\$473,439	\$464,612		
66 Minus Depreciation	\$249,167	\$260,000	\$260,000	\$260,000	\$249,167		
67 Equals Taxable Income	-\$114,726	-\$99,651	-\$72,610	-\$44,373	-\$4,041		
68							
69 Income Tax @ Ordinary Income Tax Rate%	-\$39,007	-\$33,881	-\$24,687	-\$15,087	-\$1,374		
70							
71 NPV COMPUTATION	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
72 After Tax Cash Flow to Equity (ATCF)	(\$2,700,000)	\$86,984	\$100,776	\$111,068	\$121,537	\$128,496	
73 After Tax Equity Reversion (ATER)							IRR: 12.53%
74 Total of ATCF + ATER	(\$2,700,000)	\$86,984	\$100,776	\$111,068	\$121,537	\$4,182,224	
75 PV Factor @ Investor's Required Annual ROE	1.000000	0.904977	0.818984	0.741162	0.670735	0.607000	NPV: \$241,698
76 PV of Total Cash Flows	(\$2,700,000)	\$78,719	\$82,534	\$82,319	\$81,519	\$2,616,607	