

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	<b>FIL 260 Spreadsheet Homework Problem 3: Real Estate Investment (this output is for the practice input values, not the ones to submit)</b>							
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)/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			Ending	Principal	Principal	Total	Principal	Interest
29		Year	Month	Owed	Owed	Payment	Repaid	Paid
30		0	0		\$6,400,000			
31		1	12	\$6,400,000	\$6,313,536	\$582,616	\$86,464	\$496,152
32		2	24	\$6,313,536	\$6,220,082	\$582,616	\$93,454	\$489,162
33		3	36	\$6,220,082	\$6,119,073	\$582,616	\$101,010	\$481,606
34		4	48	\$6,119,073	\$6,009,896	\$582,616	\$109,176	\$473,439
35		5	60	\$6,009,896	\$5,891,893	\$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)						\$4,182,224	IRR:
74	Total of ATCF + ATER	(\$2,700,000)	\$86,984	\$100,776	\$111,068	\$121,537	\$4,310,720	12.53%
75	PV Factor @ Investor's Required Annual ROE	1.000000	0.904977	0.818984	0.741162	0.670735	0.607000	NPV:
76	PV of Total Cash Flows	(\$2,700,000)	\$78,719	\$82,534	\$82,319	\$81,519	\$2,616,607	\$241,698