

INVESTMENT PROBLEM 1: INPUTS

List Price	\$135,000	
% allocated to land	15.0%	
% allocated to building	85.0%	114,750
Number of units:	2	
Market rent (per unit/month):	\$725	per month
Rental increase (per year):	5.0%	
Holding period (years):	3	
Property appreciation over H.P.	9.0%	lump sum
Vacancy & Credit Loss (% of PGI)	4.00%	
Operating Expenses (per year)		
Fixed:	\$2,400	
Variable	\$1,500	
Replacement Reserves:	\$700	
Operating Increases (per year)		
Fixed:	5.0%	
Variable	6.0%	
Replacement Reserves:	5.0%	
Financing Data		
Loan-to-value ratio	80.0%	
Term (years)	30	108,000
based on 12 payments per year		
Interest rate (per year)	10.0%	
Principal reduction on mortgage		
Year 1	\$600	
Year 2	\$663	
Year 3	\$733	
Brokerage commission:	6.0%	
IRS Depreciation (S/L)	27.5	years
Investor's effective tax rate- Income	28.0%	
Investor's effective tax rate - Cap. Gains	20.0%	
Investor's required rate of return	15.0%	

STEP 4: BEFORE TAX EQUITY REVERSION

Future Sales Price	\$147,150.00	<i>135,000 x 1.09</i>
less Selling Costs	<i>r26</i> (\$8,829.00)	
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Net proceeds from sale	\$138,321.00	
less Loan Balance	(\$106,004.00)	<i>108,000 - (600 + 663 + 250)</i>
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Before Tax Equity Reversion (BTER)	<u>\$32,317.00</u>	

STEP 5: CAPITAL GAINS TAX

Net proceeds from sale	\$138,321.00	<i>↓</i>	<i>15% x 47,150</i>	<i>Building ✓ ✓</i>
less value of the land	(\$22,072.50)			
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	\$116,248.50			\$116,248.50
Original Basis:				
building	\$114,750.00			
improvements	\$0.00			
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	\$114,750.00			
less Depreciation (total)	(\$12,518.18)	<i>4172 x 3</i>		
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Adjusted Basis	<u>\$102,231.82</u>			(\$102,231.82)
Capital gains on improvements				\$14,016.68
plus capital gain on land				
value at sale	\$22,072.50			
less original land value	(\$20,250.00)			
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capital gain on land	\$1,822.50			\$1,822.50
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Total capital gains				\$15,839.18 <i>70</i>
Capital gains tax (at investor's capital gains tax rate)				<u>\$3,167.84</u>

STEP 6: DISCOUNTING THE CASH FLOWS

	Year 1	Year 2	Year 3
ATCF	\$1,330.45	\$1,727.95	\$2,143.61
plus BTER			\$32,317.00
less Capital Gains Tax			(\$3,167.84)

Handwritten notes: "At 3" next to ATCF, "At 4" next to less Capital Gains Tax. A red arrow points from the Year 3 column to the word "ANSWER".

Total Benefits	\$1,330.45	\$1,727.95	\$31,292.77
PV factor (at investor's)	0.869565	0.756144	0.657516

PV - Total Benefits	\$1,156.91	\$1,306.58	\$20,575.50
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PV - Total Benefits	<u>\$23,038.99</u>		
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Handwritten notes: A red circle around the PV values. A red arrow points from the PV values to the formula $(\frac{1}{(1+i)^n})$. Another red arrow points from the formula to the calculation $\frac{1}{(1+.15)^2}$. A third red arrow points from the calculation to the number "20".

STEP 7: DECISION

PV - Total Benefits	\$23,038.99
Initial Equity	(\$27,000.00)
Net Present Value (NPV)	<u>(\$3,961.01)</u>

Handwritten notes: "135 000 x 20" written next to the NPV calculation.

Internal Rate of Return (IRR) 8.8%

NPV + → Accept

- → Reject

IRR < RR → Reject

IRR > RR → Accept