

Time Value of Money

Investor A invests \$2,000 a year for 10 years, beginning at age 25. Investor B waits 10 years, then invests \$2,000 a year for 31 years. Compare the total contributions and the total value at retirement of the two investments.

Investor A				Investor B			
			Year-End				Year-End
Age	Years	Contributions	Year End Value	Age	Years	Contributions	Year End Value
25	1	\$2,000	\$002,188	25	1	\$0	\$0
26	2	2,000	4,580	26	2	0	0
27	3	2,000	7,198	27	3	0	0
28	4	2,000	10,061	28	4	0	0
29	5	2,000	13,192	29	5	0	0
30	6	2,000	16,617	30	6	0	0
31	7	2,000	20,363	31	7	0	0
32	8	2,000	24,461	32	8	0	0
33	9	2,000	28,944	33	9	0	0
34	10	2,000	33,846	34	10	0	0
35	11	0	37,021	35	11	2,000	2,188
40	16	0	57,963	40	16	10,000	16,617
45	21	0	90,752	45	21	10,000	39,209
50	26	0	142,089	50	26	10,000	74,580
55	31	0	222,466	55	31	10,000	129,961
60	36	0	348,311	60	36	10,000	216,670
65	41	0	545,344	65	41	10,000	352,427
Value at Retirement			\$545,344	Value at Retirement			\$352,427
Less Total Contributions			(\$20,000)	Less Total Contributions			(\$62,000)
Net Earnings			\$525,344	Net Earnings			\$290,427

Note: Assumes a nine percent fixed rate of return, compounded monthly. All interest is left in the account to allow interest to be earned on interest.