

	Joe	John
starts saving at age	22	42
savings per mo.	\$100	\$500
annual interest	10%	10%
compounded	monthly	monthly
periodic rate	about 0.8333%	about 0.8333%
retirement age	65	65
months paid in	$43 \cdot 12 = 516$	$23 \cdot 12 = 276$
total paid in	$\$100 \cdot 516 = \$51,600$	$\$500 \cdot 276 = \$138,000$
value at retirement	$\sum_{i=1}^{516} 100(1.008333)^i$ $= 100 \left( \frac{(1.008333)^{516} - 1}{.008333} \right)$ $= \mathbf{\$856,665.19}$	$\sum_{i=1}^{276} 500(1.008333)^i$ $= 500 \left( \frac{(1.008333)^{276} - 1}{.008333} \right)$ $= \mathbf{\$532,741.78}$