1) "Original amount of the credit card" = PV

\[ N = 7 \times 12 = 84 \quad PMT = \$165 \]

\[ I = 23.5\% \quad FV = \Phi \]

\[ PV = \$6773.23 \quad 4.565 \quad P/Y = 12 \quad ENTER/\downarrow \]

\[ 6773.23 \quad \boxed{C/Y = 12} \quad \boxed{2nd} \quad \boxed{CPT} \]

2) Interest Paid = Amount Paid - PV

\[ PV = \$6773.23 \]

\[ Amount\ Paid = N \times PMT \quad N = 84 \quad PMT = \$165 \]

\[ Amount\ Paid = 84 \times \$165 = \$13,860 \]

\[ Interest\ Paid = \$13,860 - \$6,773.23 = \$7,086.77 \]

3) a) "How much after 15 years?" = FV = ?

\[ N = 15 \times 4 = 60 \quad PMT = 550 \]

\[ I = 6.43 \quad FV = \$550,204.28 \quad 889 = \$550,204.3 \]

\[ PV = \Phi \quad P/Y = 4 \quad \boxed{ENTER/\downarrow} \quad "Quarterly" \quad \boxed{of\ every\ 3\ Months} \]

\[ \boxed{1/Y = 12} \quad \boxed{2nd} \quad \boxed{CPT} \quad "Monthly" \]

b) Interest Earned = FV - Amount Paid

\[ FV = \$550,204.3 \]

\[ Amount\ Paid = N \times PMT \quad N = 60 \quad PMT = \$550 \]

\[ Amount\ Paid = 60 \times \$550 = \$33,000 \]

\[ Interest\ Earned = \$550,204.3 - \$33,000 = \$220,204.3 \]
4) Today 20 Years - 20 Years 30 Years

PMT = $1000 every 6 Months

or Semi Annually For 20 years FV=? Date of Retirement

FV: Today to 20 Years

FV: 20 Years to 30 Years

5) "Purchase Price of the car?" = PV = ?

Effective Rate means C/Y is annual

Down payment is added to the PV of the payment