EXAMPLE SCENARIO

A yacht club has just replaced its marina at a cost of 8.5 million. The marina is expected to have a useful life of "y" years and no salvage value. The yacht club is establishing a "sinking fund" for the purchase of a new marina in "y" years. Research indicates that on average the cost of construction increases "z"% each year. The club can earn about "x"% in a conservative investment account on its monthly deposits. How much must the club deposit into the sinking fund at the end of each month to meet its marina replacement cost?

Assumptions:                                 Variables
Cost of new yacht club today                        8,500,000.00
30% down (for a 20 yr. commercial loan)            2,550,000.00
Annual increase in cost of construction           z%
Interest Rate                                      x%
Useful Life                                        y
Salvage Value                                      0

Price of a new Marina in 20 years will be:       PV * (1+i)^n = FV

Assumptions:                                 Variables
payment made at end of month with interest compounding monthly
AV                                              FV
n                                              y*12
i                                              x/12

Sum of all future payments must equal            FV

\[ \text{PMT} = \frac{(i*FV)/(((1+i)^n)-1)} \]

Monthly Payment Amt.