# Personal Financial Planning Worksheet

## Estimating savings needs

*You will need a financial calculator (one with time value of money functions).*

*Preliminary steps: clear tvm on calculator, and set P/Y to 1*

Average salary you expect to make and live off of in retirement _____ (1)

Multiplier (see notes) x 10

Assets needed to fund retirement _____ (2)

- *Enter amount from (2) as FV*
- *Enter amount already saved (enter zero if none) as PV*
- *Enter the number of years remaining in your work life (i.e. age 70 – current age) as N*
- *Enter an interest rate (probably between 6% and 9%) _____*
- *Press CPT and PMT to calculate annual savings needed and enter below (3)*

Payment needed to accumulate funds _____ (3)

*Optional*

- *Divide amount from (3) by (1)*

Payment as a percent of salary (current or expected) _____ (4)

## Notes

(1) This simple analysis assumes no inflation and no growth in your salary but those modifications may not substantially alter the results.

(2) Why did we use a multiplier of 10? Simple if you assume a 10% return, then 10% of 10 times your current salary would return your current salary, without depleting your principal (assuming no inflation). If you assume an average return of 8%, then your multiplier becomes 12.5. The multiplier is found by taking the reciprocal of the interest rate.

(3) During retirement, if you have an inflation of 3%, then the value would decrease at a rate of 3% per year. You would have to draw an additional 3% per year to compensate. In this scenario, your funds would be depleted after a number of years. Inflation before retirement has several effects: One, your salary probably is increasing at least by inflation thereby offsetting some of its effects. Two, stock prices tend to go up with inflation as firms revenue streams increase due to inflation. Bond investments would tend to lose value.