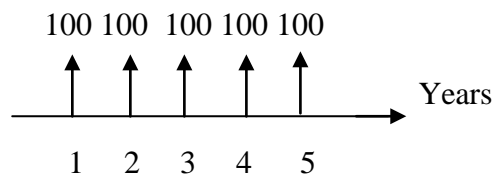


Uniform series of cash flows

Uniform series of cash flows exists when all cash flows in a series are **equally sized and spaced**.



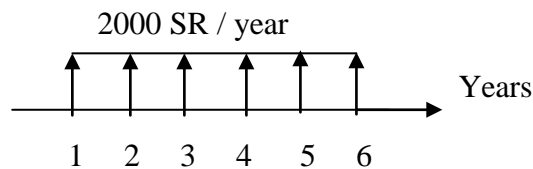
$$P = A(P/A \ i\%, \ n)$$

$$A = P(A/P \ i\%, \ n)$$

$$F = A(F/A \ i\%, \ n)$$

$$A = F(A/F \ i\%, \ n)$$

Ex.1



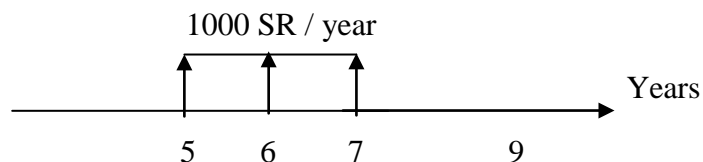
Find present worth and future worth if $i = 8\%$ compounded annually.

$$P = A(P/A \ i\%, \ n) = 2000(P/A \ 8\%, \ 6) = 2000(4.62288) = 9245.76 \text{ SR} \quad P \text{ at } t=0 \rightarrow Pw$$

$$F = A(F/A \ i\%, \ n) = 2000(F/A \ 8\%, \ 6) = 2000(7.33593) = 14671.86 \text{ SR} \quad \rightarrow Fw$$

$$\text{OR } F = P(F/P \ i\%, \ n) = 9245.76 (F/P \ 8\%, \ 6) = 9245.76 (1.58687) = 14671.82 \text{ SR} \rightarrow Fw$$

Ex .2



Find the present worth for this series if $i = 10\%$ compounded annually, and also find the future worth at the end of the ninth year.

$$P = A(P/A \ i\%, \ n) = 1000(P/A \ 10\%, \ 3) = 1000(2.48685) = 2486.85 \text{ SR.}$$

$$P = F(P/F \ i\%, \ n) = 2486.85(P/F \ 10\%, \ 4) = 2486.85 (0.68301) = 1698.54 \text{ SR} \rightarrow Pw$$

$$F = A(F/A \ i\%, \ n) = 1000(F/A \ 10\%, \ 3) = 1000(3.31000) = 3310 \text{ SR.}$$

$$F = P(F/P \ i\%, \ n) = 3310(F/P \ 10\%, \ 2) = 3310(1.21000) = 4005.1 \text{ SR} \rightarrow Fw$$

$$\text{Or } Fw = Pw(F/P \ i\%, \ n) = 1698.54 (F/P \ 10\%, \ 9) = 1698.54 (2.35795) = 4005.07 \text{ SR}$$