

Interest Factor Equations

(P/F,i,n)

Single Payment Present Worth (Converts Future Worth to Present Worth)

$$P = F(1 + i)^{-n}$$

(F/P,i,n)

Single Payment Compound Amount (Converts Present Worth to Future Worth)

$$F = P(1 + i)^n$$

(P/A,i,n)

Uniform Series Present Worth (Converts Uniform Series to Present Worth)

$$P = A \frac{(1 + i)^n - 1}{i(1 + i)^n}$$

(F/A,i,n)

Uniform Series Compound Amount (Converts Uniform Series to Future Worth)

$$F = A \frac{(1 + i)^n - 1}{i}$$

(A/P,i,n)

Capital Recovery (Converts Present Worth to Uniform Series)

$$A = P \frac{i(1 + i)^n}{(1 + i)^n - 1}$$

(A/F,i,n)

Uniform Series Sinking Fund (Converts Future Worth to Uniform Series)

$$A = F \frac{i}{(1 + i)^n - 1}$$

(P/G,i,n)

Uniform Gradient Present Worth (Converts Uniform Gradient Series to Present Worth)

$$P = G \left(\frac{(1 + i)^n - 1}{i^2(1 + i)^n} - \frac{n}{i(1 + i)^n} \right)$$

(F/G,i,n)

Uniform Gradient Future Worth (Converts Uniform Gradient Series to Future Worth)

$$F = G \left(\frac{(1 + i)^n - 1}{i^2} - \frac{n}{i} \right)$$

(A/G,i,n)

Uniform Gradient Uniform Series (Converts Uniform Gradient Series to Uniform Series)

$$A = G \left(\frac{1}{i} - \frac{n}{(1 + i)^n - 1} \right)$$

An **Interest Factor Table** can be used instead of the equations given here, e.g.,
http://global.oup.com/us/companion.websites/9780199778126/pdf/Appendix_C_CITables.pdf.