Some Useful Formulas

$$S = P(1 + r)^n$$

$$P = S(1 + r)^{-n}$$

$$r_e = \left(1 + \frac{r}{n}\right)^n - 1$$

$$S = Pe^{rt}$$

$$P = Se^{-rt}$$

$$r_e = e^r - 1$$

$$A = Ra_{\overline{n}|r} = R\frac{1 - (1 + r)^{-n}}{r}$$

$$R = \frac{A}{a_{\overline{n}|r}} = A\frac{r}{1 - (1 + r)^{-n}}$$

$$S = Rs_{\overline{n}|r} = R\frac{(1 + r)^n - 1}{r}$$

$$\sum_{i=1}^{\infty} ar^{i-1} = \frac{a}{1 - r}$$

$$\sum_{i=1}^{k} ar^{i-1} = \frac{a(1 - r^k)}{1 - r}$$

$$\text{Int}_k = R \cdot \left[1 - (1 + r)^{-n+k-1}\right]$$
$$\text{Prin}_k = R \cdot (1 + r)^{-n+k-1}$$