Overleaf 2

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$$\Omega = \sum_{k=1}^{n} \omega_k$$

$$min_{x,y}(1-x)^2 + 100(y-x^2)^2$$
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$$\beta_i = \frac{\mathrm{Cov}(R_i, R_m)}{\mathrm{Var}(R_m)}$$

$$\begin{aligned}(x+1)^3 &= (x+1)(x+1)(x+1)\\ &= (x+1)(x^2+2x+1)\\ &= x^3+3x^2+3x+1\end{aligned}$$

Let X_1, X_2, ..., X_n be a sequence of independent and identically distributed random variables with $E[X_i] = \mu$ and $Var[X_j]$ $=\sigma^2 < \infty$, and let

$$S_n = \frac{1}{n}\sum_{i=1}^{n} X_i$$

denote their mean. Then as n approaches infinity, the random $\sqrt{n}(S_n$-$\mu)$ variables converge in distribution to a normal $N(0$,$\sigma^2)$.

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