# CO CHW3 99105129

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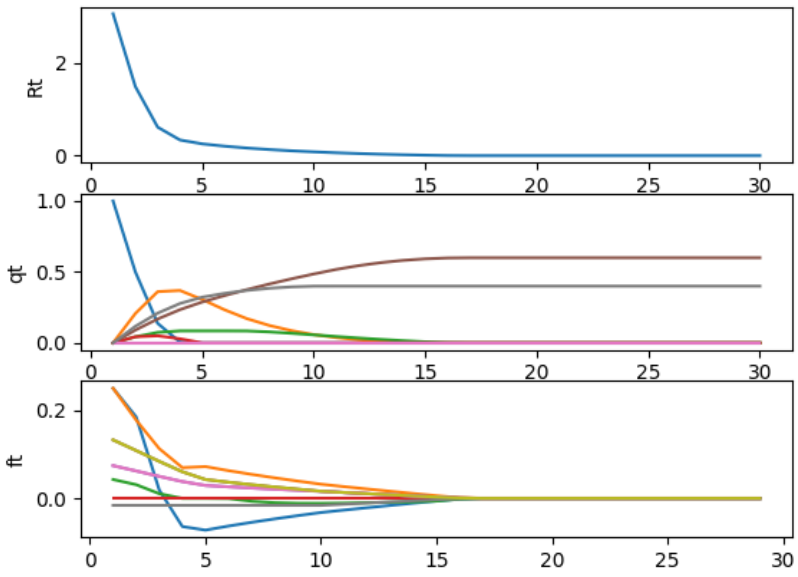
## 1 1

total risk: 6.589671916256949
evacuation time: 17



## 2 2

$$
\begin{array}{ll}
\text{find} & \theta \\
\text{subject to} & \sum_{j=1}^{k} \theta_j \log P^{(j)} \leq \log P_{\text{spec}} \\
& \sum_{j=1}^{k} \theta_j \log D^{(j)} \leq \log D_{\text{spec}} \\
& \sum_{j=1}^{k} \theta_j \log A^{(j)} \leq \log A_{\text{spec}} \\
& \mathbf{1}^T \theta = 1, \quad \theta \succeq 0,
\end{array}
$$

w:

3.28069166 2.96934036 3.26617754 2.32426888 3.66532996 2.92976112 3.68571815 3.8940303 3.3972013

$\theta$:

0.49673786 0.00452331 0.47531367 0.00408995 0.00174836

## 3 5

$$maximize : \mu^T w - \sum_{1}^{M} \gamma_k w^T \Sigma^k w$$

$$s.t. : 1^T w = 1$$

weights =

0.66426997 -0.11469037 1.38055509 1.42422852 -1.5270649 -0.61401545 -0.49879081 -0.25406876 0.11483851