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## 1 Allocations in the Deterministic Case

I am to solve the system of differential equations

$$\mathcal{U}'(\theta) = \frac{k}{\theta c_0} \tag{1}$$

$$\mu'(\theta) = \frac{\lambda_1 c_1}{\beta} - \mu \frac{f'}{f} \tag{2}$$

where the allocations  $c_0(\theta)$ ,  $c_1(\theta)$ , and  $k(\theta)$  are solutions to the following:

## 2 Stochastic i.i.d. Model