„Coin change"

$$\min \sum_{i=1}^{n} x_i = y_S \quad (1)$$

$$\text{s.t.} \sum_{i=1}^{n} x_i s_i = S$$

$x_i \in \{0,1\}$

$s_i \in \{0,1,2,\dots,25,50,\dots,60\}$

$S \in \{501,\dots,2\}$

$$\min \quad y_S$$

$$\text{s.t.} \sum_{i=1}^{y_S - 1} s_i + d = S \quad (2)$$

$s_i \in \{0,1,2,\dots,25,50,\dots,60\}$

$d \in \{2,4,\dots,40,50\}$

$S \in \{501,\dots,2\}$

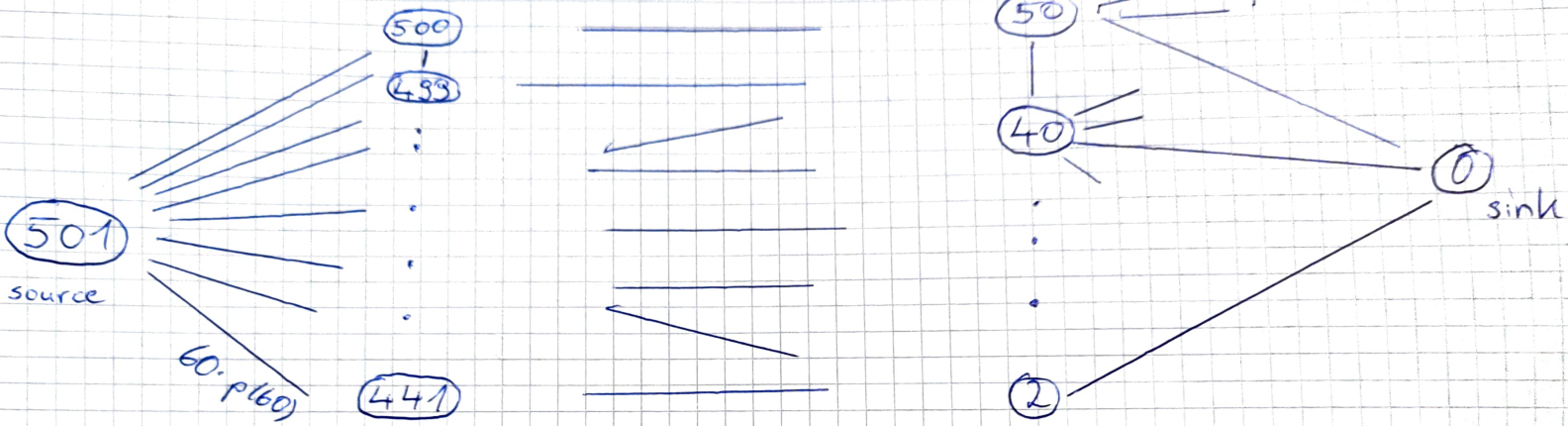
„Perfect track":

$$\max \sum_{i=1}^{y_S - 1} s_i \cdot p(s_i) + d \cdot p(d) \quad (3)$$

$$\text{s.t.} \sum_{i=1}^{y_S - 1} s_i + d = S$$

Adjusted DP:

$$V(S,i) = \min_s V(S+1, i+1) \cdot p(s) \quad (4)$$



excluding all paths > 9 ?