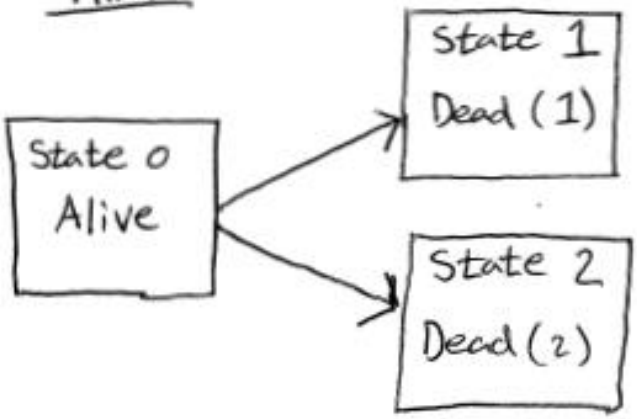
Solution 179

Kira



Kevin

x	$\ell_x^{(\tau)}$	$d_x^{(1)}$	$d_x^{(2)}$
61	800	160	80
62	560	—	—

* Recall *

${}_tp_x^{12}$ ~ Probability of an (x) year-old in state 1 being in state 2 at age $(x+t)$

Calculate: $p_{61}^{00} + p_{61}^{01} + p_{61}^{10} + p_{61}^{11}$

$$p_{61}^{00} = l_{62}^{(\tau)} / l_{61}^{(\tau)} = 560/800$$

$$p_{61}^{01} = d_{61}^{(1)} / l_{61}^{(\tau)} = 160/800$$

$p_{61}^{10} = 0$ → One cannot exit state 1

$p_{61}^{11} = 1$

$$p_{61}^{00} + p_{61}^{01} + p_{61}^{10} + p_{61}^{11}$$

$$= 560/800 + 160/800 + 0 + 1$$

$$= 1.90$$

~ (C)