Exercise 4.1

All answers below did not match textbook answers in the 1st edition. I am glad to see they corrected this in the 2nd edition - now they match!

(a) ${}_5E_{35} = v^5 {}_5p_{35} = (1.06)^{-5} \dfrac{98485.58}{100000} = 0.7359423$

(b) $A^1_{35:\overline{5}|} = A_{35} - {}_5E_{35}\, A_{40} = 0.151375 - (0.7359423)(0.188492) = 0.01265577$

(c) ${}_{5|}A_{35} = {}_5E_{35}\, A_{40} = (0.7359423)(0.188492) = 0.1387192$

(d) Assuming UDD, $\bar{A}_{35:\overline{5}|} = \dfrac{i}{\delta} A^1_{35:\overline{5}|} + {}_5E_{35} = \dfrac{0.06}{\log(1.06)}(0.01265577) + 0.7359423 = 0.748974$