Gamblers ruin

- Draw the transition graph for the gamblers ruin.

- Write out the one-step transition matrix for the gamblers ruin problem.

- On the transition graph that you wrote out in the first of these questions highlight the recurrent states.

- Explain what the symbol π_k is used to represent in the video and then explain why $\pi_0 = 1$ and why $\pi_N = 1$.

Gamblers ruin

- Write out and explain the derivation of the homogeneous difference equation that can be used to find all the π_k values that have $0 < k < N$.

- Explain what the symbol d_k is used to represent in the video and then explain why $d_0 = 0$ and why $d_N = 0$.

- Write out and explain the derivation of the inhomogeneous difference equation that can be used to find all the d_k values that have $0 < k < N$.