

Z-transform practice problems

- [[Nov 21st, 2024]] Exam questions

$$a_{n+2}^2 - 5a_{n+1}^2 + 6a_n^2 = 7n; \quad a_0 = 1, \quad a_1 = 1$$

$$a_{n+2} - \sqrt{3}a_{n+1} + a_n = 0; \quad a_0 = 0, \quad a_1 = 1$$

$$a_{n+2} - 12a_{n+1} + 36a_n = 2 \cdot 6^n; \quad a_0 = 0, \quad a_1 = 1$$

- [[Feb 22nd, 2024]] Exam retake questions

$$a_{n+2} + 4a_n = 3; \quad a_0 = 0, \quad a_1 = 1$$

$$a_{n+2} - 2a_{n+1} + a_n = 1; \quad a_0 = 0, \quad a_1 = 1$$

$$a_{n+2} - 5a_{n+1} + 4a_n = 6^n; \quad a_0 = 1, \quad a_1 = 1$$

- [[Feb 19th, 2024]] Exam retake questions

$$a_{n+2} - 2a_{n+1} + 2a_n = 3; \quad a_0 = 0, \quad a_1 = 1$$

$$a_{n+1} = 8a_n + 10^n; \quad a_0 = 1$$

$$a_{n+2} - 5a_{n+1} + 6a_n = 2; \quad a_0 = 3, \quad a_1 = 7$$