E2–202 Random Processes Due: 24 October 2026

Problem Set 8

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Remarks:

- Collaboration, discussion, and working in teams to solve problems is strongly encouraged.
- To test your understanding, practice the solution to each problem in your own words without referring to a friend, text, class notes, or AI engines.

Problems:

1. Problem 2.7 of Section 2.11 of the reference text.
2. Problem 2.12 of Section 2.11 of the reference text.
3. Problem 2.16 of Section 2.11 of the reference text.
4. Problem 2.17 of Section 2.11 of the reference text.
5. Problem 2.18 of Section 2.11 of the reference text.
6. Problem 2.19 of Section 2.11 of the reference text.
7. Problem 2.20 of Section 2.11 of the reference text.
8. In the proof of Theorem 2.10 of the reference text, interpret the equation $\mathbf{y}^{(n)} = \mathbf{Q}\mathbf{y}^{(n-1)}$.
9. In the example in Section 2.8, verify the Equation (2.3).
10. Exercise 2.16 of the reference text.