Linear Algebra 2270-4
Due in Week 8

The 7th week starts the work from chapter 4, due in week 8. Here's the list of problems, all of which have book answers except 4.3-34.

Section 4.1. Exercises 1, 5, 7, 11, 13, 21, 27

Section 4.2. Exercises 3, 5, 11, 15, 23, 31

Section 4.3. Exercises 5, 9, 11, 13, 15, 19, 34

Answer to 4.3-34: Polynomials 1 and 2 are a potential basis, because polynomial 3 is a linear combination of 1 and 2. Further, polynomials 1 and 2 have span equal to the span of 1, t, succinctly $\mathbf{span}\{p_1, p2\} = \mathbf{span}\{1, t\}$. Because 1, t are independent, then p_1, p_2 are also independent. Then polynomials 1 and 2 form a basis for the span of polynomials 1, 2 and 3.