Suggested study exercises (with solutions in the book, not to hand in): Chapter 4, Ex. 3, 4 (have you seen this before?), 6, 8, 9, 10, 11, 17, 18, 20, 25, 26, 27; Chapter 5, Ex. 1, 2, 3, 4, 5, 10.

Problems from the book:

   Chapter 4: Ex. 32 (see 19 for definition), 33, 35, 37, 44
   Chapter 5: Ex. 18, 22

Additional problems:

   A. Prove the identity in Chapter 4, Ex. 34 two ways: combinatorially, and using the binomial theorem.

   B. Prove the identity

   \[ \sum_m \binom{n}{m} S(m, k) S(n - m, l) = \binom{k + l}{l} S(n, k + l), \]

   valid for all non-negative integers \( k, l, n \).