5 Review Homework for Midterm (practice homework, do not turn in)

The homework is from the textbook:

page 27: 4 (b), 5 (g)

page 38: 6 (d)

page 53: 3 a), 7 b)

page 63: 11 b), d)

page 74: 1, 6 d)

2) Write the Bernstein polynomials of degree $n = 2$ to approximate the function $f(x) = \tan x$ on $[0, 1]$ interval.

3) Estimate the approximation error when approximating $f(x) = \tan x$ by $B_n(f, x)$, using the modulus of continuity.

page 119: 1 c), 2 c)

page 195: 1 d), 3 d), 5 d)

page 255: 1 a), d), 2 a), b)

page 263: 1 a), c), 3 a)

In these last problems set up the iterations as in Euler's method but do not calculate all the terms. Two terms of the sequence (x_1, x_2) are enough.