The "Roll-over" Optimization Problem

Score = ((60 – (a+b+c+d+e))*F + a*ps1 + b*ps2 + c*ps3 + d*ps4 + e*ps5

Objective:

Given values for F, ps1, ps2, ps3, ps4, ps5
Find values for a, b, c, d, e that maximize score

Constraints:

a, b, c, d, e are each 10 or 0
a + b + c + d + e ≥ 20