Problem 1.b)

Use initial point: x0 = (1, 1, 1, 1) to solve:

minimize:
$24.55x1 + 26.75x2 + 39.00x3 + 40.50x4$

subject to:
$2.3x1 + 5.6x2 + 11.1x3 + 1.3x4 - 5 >= 0$
$12x1 + 11.9x2 + 41.8x3 + 52.1x4 - 21 - 1.645(0.28x1^2 + 0.19x2^2 + 20.5x3^2 + 0.62x4^2)^{1/2} >= 0$
$x1 + x2 + x3 + x4 - 1 = 0$
$0 <= xi, i = 1, ..., 4$

(Refer next page for solution using the Excel Solver and Matlab's *fmincon* solver.)