Problem 1

a) $RA = 45 \times 0.25 + 26 \times 0.25 + 20 \times 0.25 + 3 * 0.25 =$

$= (45 + 26 + 20 + 3) \times 0.25 = 23.5$

$RB = (12 + 17 + 4 + 5) \times 0.25 = 9.5$

$RC = (-20 - 2 + 5 + 12) \times 0.25 = -1.25$

Expected return $= 0.3 \times 23.5 + 0.5 \times 9.5 - 0.2 \times 1.25 =$

$= 11.55$

Worst-case return: $\min \{23.5, 9.5, -1.25\} = -1.25$

b) Maximize M

$x_1 + x_2 + x_3 + x_4 = 1$

$RA = 45 x_1 + 26 x_2 + 20 x_3 + 3 x_4$

$RB = 12 x_1 + 17 x_2 + 4 x_3 + 5 x_4$