Anish Sachdeva
DTU/2K16/MC/13

Financial Engineering
Assignment-4

Q1)a) $E[R_{k_1}] = 0.2(-10) + 0(0.5) + 20(0.3)$
$\qquad = 4\%$

$E[R_{k_2}] = 0.2(-30) + 20(0.5) + 15(0.3)$
$\qquad = 8.5\%$

b) if 60% of available funds are invested in k_1 then weight $k_1 = 0.6$ and

$\qquad$ weight $k_2 = 0.4$ $\quad (W_1 + W_2 = 1)$

$\qquad E[Portfolio] = W_{k_1} E[R_{k_1}] + W_{k_2} E[R_{k_2}]$

$\qquad\qquad = (0.6)4 + (0.4)8.5$
$\qquad\qquad = 2.4 + 3.4 = 5.8\%$

c) Suppose $W_{k_1} = x$

$\qquad$ then $W_{k_1} = 1-x$
$\qquad\qquad x(4) + (1-x)(8.5) = 20$
$\qquad\qquad 4x + 8.5 - 8.5x = 20$

$\qquad\qquad \boxed{x = 2.56}$

This isn't possible as $x \in [0,1]$
This much expected return isn't possible