Operations Research

Homework 1

Due in class Wednesday, February 10, 2016

1. Minimize
$$z = 8\,x + 12\,y$$

   subject to

   $$5\,x + 2\,y \geq 20\,,$$
   $$4\,x + 3\,y \geq 24\,,$$
   $$y \geq 2\,,$$
   $$x, y \geq 0\,.$$

2. A sum of \$12 000 is to be invested. At least half the amount will go into an investment earning 6% annual interest, but involving some risk. Thus, the amount in the risky investment may not be more than three times the amount in a second, relatively riskless investment earning 5% annual interest. How much should be invested into each in order to maximize interest?