

Quiz 2 for Statistics 213
Probability and Decision Theory - Spring 2002
Material Covered: Sections 3.1, 3.2 and 3.3 of workbook and text
Friday, 8th February

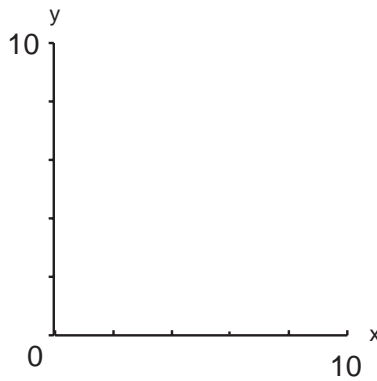
This is a 15 minute quiz, worth 5% and marked out of 5 points.

Name (please print): _____ ID Number: _____
last first

Consider the following system of linear inequalities.

$$\begin{aligned} -x + y &\geq 3 \\ -2x + y &\leq 3 \\ -5x + 8y &\leq 40 \end{aligned}$$

(a) [2 points] Use your calculator to help you draw the system of linear inequalities.



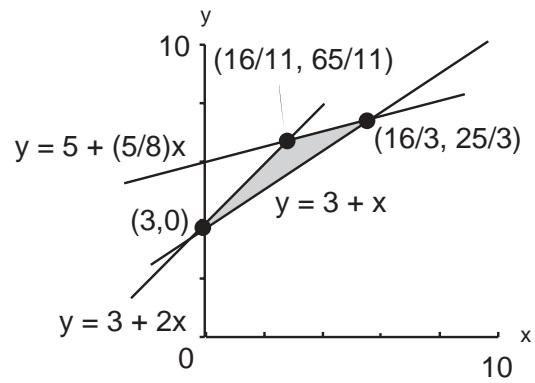
(b) [2 points] There are three points in the solution set. They are

$$(x, y) = (\text{---}, \text{---}) \quad (x, y) = (\text{---}, \text{---}) \quad (x, y) = (\text{---}, \text{---})$$

(c) [1 point] If the objective function is *Maximize* $C = 2x - 3y$,

then the optimal solution is $(x, y) = (\text{---}, \text{---})$

(a) Draw



(b) $(3, 0)$, $(\frac{16}{11}, \frac{65}{11}) = (1.45, 5.909)$, $(\frac{16}{3}, \frac{25}{3}) = (5.33, 8.33)$

(c) $(x, y) = (3, 0)$
STAT EDIT : 6 for $(3, 0)$,
-4.82 for $(\frac{16}{11}, \frac{65}{11}) = (1.45, 5.909)$,
and -14.33 for $(\frac{16}{3}, \frac{25}{3}) = (5.33, 8.33)$