

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
STAT-361 Operations Research I ¹
Quiz 1

Exercise 1

Consider the following linear program:

$$\begin{array}{ll} \max_{x_1, x_2, x_3} & x_1 + 2x_2 + 3x_3 \\ \text{s.t} & x_1 + 2x_2 + 3x_3 \leq 3, \\ & 2x_1 + x_2 + x_3 \leq 4, \\ & 3x_1 + 3x_2 + 2x_3 \leq 5, \\ & x_1, x_2, x_3 \geq 0. \end{array}$$

(a) Write the standard form corresponding to this linear program.

¹Dr. Slim Belhaiza (c), February, 2016

(b) Solve the linear program using the Simplex method (Tableau).

(c) Give the optimal basic feasible solution found.