



Maximize  $5x_1 + 7x_2$  s.t.  $x_1 \geq 0, x_2 \geq 0$  and

$$\begin{cases} 1x_1 + 0x_2 \leq 6 \\ 2x_1 + 3x_2 \leq 22 \\ 1x_1 + 1x_2 \leq 8 \end{cases}$$

$l_2'$  &  $l_3$  meet at  $(2, 6)$

Optimal Solution:

Objective function value is 52 when  $x_1 = 2, x_2 = 6$ .

Increasing the RHS of constraint by 3 yields an increase of 6 in the maximum value of the objective function.