

To receive full credit for this 25 point quiz, you must show ALL work. You have 10 min to complete this quiz. No quizzes will be accepted after that time.

**1.** (*25 points*) Given the following linear program:

Let  $x$ =the number of chairs,  $y$ =number of tables made on Monday.

Maximize:  $P = \$60x + \$50y$

Subject to:

$3x \leq 1500$  yards of fabric

$2x + 4y \leq 3000$  board-feet of lumber

$30x + 15y \leq 18,000$  minutes workers' time

$x \geq 0, y \geq 0$

Is it feasible to make 30 chairs and 10 tables? If so, what is the profit?