

3. Determine if the following problems are standard or non-standard.

**5pts** a) Maximize  $P = -2x + y$

subject to

$$2x - 3y \leq 5$$

$$6x + y \leq 8$$

$$x \geq 0, y \geq 0$$

Standard <sup>5pt</sup>

**5pts** b) Minimize  $C = 2x - 3y$

subject to

$$-2x + y \leq 10$$

$$x - 3y \geq 9$$

$$x \geq 0, y \geq 0$$

non-standard <sup>5pt</sup>

**5pts** c) Maximize  $P = 8x + 3y$

subject to

$$2x - 5y \leq 3 \leftarrow 2x - 3 \leq 5y$$

$$x - 8y \leq 10$$

$$x \geq 0, y \geq 0$$

Standard <sup>5pt</sup>

**5pts** d) Maximize  $P = 2x + y$

subject to

$$-3x - 6y \leq -2 \leftarrow -3x + 2 \leq 6y$$

$$x + 5y \leq 8$$

$$x \geq 0, y \geq 0$$

non-standard <sup>5pt</sup>