Math 131 - 03 Quiz # 3 (A)

Name_____ Serial #_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) A manufacturer sells his product at $12.50 per unit, selling all he produces. His fixed cost is $5,000 and his variable cost per unit is $8.50. (a) At what level of production will he break even? (b) At what level of production will he have a profit of $10,000?

2) Sketch the region described by the following system of inequalities:

$$\begin{cases} x > 1 \\ y \geq 2x - 3 \\ 2y + x < 10 \end{cases}$$

3) Maximize

$$Z = 2x - 3y$$

subject to

$$\begin{aligned} 2x + y &\geq 1 \\ x - y &\leq 1 \\ x, y &\geq 0. \end{aligned}$$

Also find the corner point where the value of $z$ is attained.