Hint for number 5:

We want an objective function for total yield on one acre.

$y = 1000 - 20x$ gives us yield / tree.

For example, when 10 trees are planted on one acre we get $1000 - 20 \cdot 10 = 800$ peaches for each tree.

To get the total yield, we need to multiply through by the number of trees that are planted. That's 10 in this example.
So there are $8000 = 800 \times 10$ peaches produced on one acre when we plant 10 trees.

Therefore total yield $= \frac{\text{yield}}{\text{trees}} \times \underbrace{\#\text{trees}}_{\text{represented by variable } x.}$

we get the objective function:

$$\text{total yield} = 1000x - 20x^2$$

(no constraint is necessary)

In #6 the problem says that the yield/tree is 800 when the farmer plants 50 or fewer trees, and the yield/tree decreases by 20 peaches per tree for every extra tree planted.

The yield/tree function is a piece-wise function.

$$\text{yield/tree} = \begin{cases} 800 & x \leq 50 \\ 800 - 20(x-50) & x > 50 \end{cases}$$

To get total yield we multiply through by x.

$$\text{yield} = \begin{cases} 800x & x \leq 50 \\ (800 - 20(x-50))\,x & x > 50 \end{cases}$$