Pear Computers – recursion

Pear Computers has a contract to deliver the following number of laptop computers during the next three months:

	Month 1	Month 2	Month 3
Laptop computers required	200	300	200

For each laptop produced during months 1 and 2, a $100 cost is incurred; for each laptop produced during month 3, a $120 cost is incurred. Each month in which the company produces laptops requires a factory setup cost of $2,500. Laptops can be held in a warehouse at a cost of $15 for each laptop in inventory at the end of a month. The warehouse can hold at most 400 laptops.

Laptops made during a month may be used to meet demand for that month or any future month. Manufacturing constraints require that laptops be produced in multiples of 100, and at most 300 laptops can be produced in any month. The company's goal is to find a production plan that will meet all demands on time and minimizes its total production and holding costs over the next 3 months. Formulate this problem as a dynamic program by giving its recursive representation. Solve the dynamic program.