1. A farmer has 10 acres to plant in wheat and rye. He has to plant at least 7 acres. However, he has only $1200 to spend and each acre of wheat costs $200 to plant and each acre of rye costs $100 to plant. If the profit is $500 per acre of wheat and $300 per acre of rye, how many acres of each should be planted to maximize profits?

2. The farmer in the previous problem has to get the planting done in 12 hours and it takes an hour to plant an acre of wheat and 2 hours to plant an acre of rye. How many acres of each should be planted to maximize profits?