

- (1) (5 points) A certain city had a population of 20,000 in 1980 and a population of 25,000 in 1990. Assume that its population will continue to grow exponentially at a constant rate. What population can its city planners expect in year 2000? (Do not simplify your answer!)

- (2) (5 points) Find a general solution of the differential equation, $y' + 3y = 2xe^{-3x}$.