

**85.**

Computer maintenance costs for a department are modeled as follows:

- (i) The distribution of the number of maintenance calls each machine will need in a year is Poisson with mean 3.
- (ii) The cost for a maintenance call has mean 80 and standard deviation 200.
- (iii) The number of maintenance calls and the costs of the maintenance calls are all mutually independent.

The department must buy a maintenance contract to cover repairs if there is at least a 10% probability that aggregate maintenance costs in a given year will exceed 120% of the expected costs.

Using the normal approximation for the distribution of the aggregate maintenance costs, calculate the minimum number of computers needed to avoid purchasing a maintenance contract.

- (A) 80
- (B) 90
- (C) 100
- (D) 110
- (E) 120