A state’s environmental agency worries that many cars may be violating clean air emissions standards. The agency hopes to check a sample of vehicles in order to estimate that percentage with a margin of error of 3% and 90% confidence. To gauge the size of the problem, the agency first pick 60 cars and finds 9 faulty emissions systems. How many should be sampled for a full investigation? Show all your work for full credit. Carefully justify your answers.