



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Your production facility is planning to expand. A new hen house is being proposed to house an additional 1000 laying hens in a cage system. Assume the total space required for each hen is three square feet. The wholesale price for eggs is \$0.08 per egg. Assume average egg production per hen is 260 eggs per year.

The contractor has quoted a price of \$62.00 per square foot to construct the building, which includes plumbing and electrical work. Also, assume you need 150 square feet for office and washroom space as well as 200 square feet for climate control machinery.

A. How many square feet will your building have to be to accommodate the 1000 laying hens?

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B. How much will the new structure cost to build

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C. Given the price and average production, how long would the new hens take to pay for the new structure?

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