Graded Assignment 2 - Better Life Pharmacies

Part 1: Optimal order quantity

1.0/1.0 point (graded)

Joshua is running a pharmacy in Nigeria (where Naira is the local currency). His recent experience in the MicroMasters course motivated him to rethink how to reorder pharmaceuticals to replenish inventory. He recalls from Week 2, Lesson 1, Video 5, that he should consider the purchase cost, the order cost, and the holding cost. In the past, Joshua rigorously tracked these cost items. For Ibuprofen he knows that:

unit cost: c = 497 Naira/pack

demand: D = 1000 packs/year

ordering cost: A = 1900 Naira/order

holding cost: $r * c$ = 49 Naira/pack*year

How many packs of Ibuprofen should Joshua order to minimize the total cost?
Round your answer to the nearest integer.

278 ✔

278

Submit You have used 0 of 2 attempts

Part 2: Consolidating orders

1.0/1.0 point (graded)

Joshua runs a second pharmacy on the other side of town. He has been ordering for each location individually from a wholesaler. He realizes that he can save some money by consolidating the two orders into one single order. The costs per pack for both pharmacies are exactly the same (use A, c and $r * c$ values from Part 1). The annual demand for Ibuprofen in the second pharmacy is 1140 packs.

What is the consolidated optimal order quantity (in packs of Ibuprofen)?
Round your answer to the nearest integer.

407 ✔

407

Submit You have used 0 of 2 attempts

Part 3: Savings from consolidation

1/1 point (graded)
If Joshua places one consolidated order (as in Part 2) instead of placing two separate orders, how much money will he save?
Round your answer to one decimal place (e.g. if the result is 1.534 put in as an answer 1.5).

8253.3 ✔

8253.3

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✔ Correct (1/1 point)

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