Math 203 Spring 2019 Professor MG
Classwork 9   Name: _____

Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise.

1. The Great American Tire Company expects to sell 600,000 tires during the next year. Each supply run costs the company $15,000. Carrying costs (based on the average number of tires in storage), are $5 per tire.

   (a) Let r be the number of orders during the year and x be the order quantity. Determine the equation for inventory cost. (Recall: inventory cost $=$ carrying cost $+$ ordering cost).

   (b) Determine the inventory cost for doing 10 supply runs during the year.

   (c) Find the order quantity that will minimize the inventory cost.

2. A company that produces electronic components expects to sell 4000 units this year. They can produce the units in production runs, but each production run costs $250 to set up. After each production, it has to pay $2 per unit to store the inventory, until they sell out (inventory cost is based on the *average* inventory between production runs). How many production runs should the company do in order to minimize the inventory costs?