a banana problem

March 20, 2017

Question 1. A farmer has 3000 bananas. She needs to take them to the market 1000 miles away to sell them; however, she only has the strength to carry 1000 bananas at a time. Also, she needs to eat 1 banana to have the energy to travel 1 mile. What is the maximum number of bananas she can get to the market?

Question 2. How do you know your answer in Question 1 is best possible? Can you prove it?