

Name: _____

Date: _____

Harvest Predictions

You have been hired by a new Georgia farmer to provide advice on how to effectively use 100 acres of their land. Part of your responsibility includes providing predictions for how much cotton can be harvested from the 100 acres.

While all parts of a cotton plant are useful, the most useful part comes from the lint that can be formed into bales of cotton fiber. Cotton fiber harvested in the United States has doubled in the last 50 years because of the collaborative work at experimental stations and laboratories, and with the help of agricultural scientists like you! All these people have helped better control disease, weeds, insects, fertilization, and irrigation to make cotton harvest more successful!

All this collaborative work has led to cotton farmers currently harvesting about $1 \frac{1}{3}$ bales of cotton per acre. One bale weighs about 500 pounds.

1. How many bales of cotton can your client predict to harvest? (Show all work.)

2. How many pounds of cotton would this equal? (Show all work.)

3. A bale of cotton can be sold for about \$450. Use the predicted number of cotton bales from Q1 to make a new prediction about how much money your cotton farmer might earn from selling the cotton that is harvested.

4. During the growing season, your client spent money to support the growth and development of the cotton farm. Those expenses are outlined in the table below:

Type of Expense	Amount of Expense
Seeds	\$70.00
Water (irrigation)	\$18,000.00
Insecticide	\$5,100.00
Fertilizer	\$19,100.00

Based on these expenses, could your client make a profit? Use evidence to support your answer.