

Joint Machinery Ownership Exercise

A. Mike and Ike decided to lease a large horsepower tractor together to use mainly for primary tillage. They farm close together, and felt they could share the tractor without running into too many bottlenecks for getting their work done.

They signed a 3-year lease for \$20,000 per year, each one paying half. They each provide their own fuel and labor. There were no repairs the first year, but they spent \$500 on routine maintenance, which they split evenly. Ignore insurance and housing.

Mike used the tractor on 1,212 acres and Ike used it on 865 acres, including two passes on some ground. In order to divide costs fairly, who should pay whom, and how much?

_____ pays _____ \$ _____

B. What if they purchased the tractor for \$120,000 instead, each paying half? Assume 7% for interest, 10 % for depreciation, and 1 % for insurance and housing, of the purchase price, for annual ownership costs. Include the \$500 for maintenance, as well.

Using the same acres, who should pay whom, and how much?

_____ pays _____ \$ _____

C. The average custom rental rate for tractors (according to the 2007 ISU survey) was \$.20 per horsepower-hour, which covers all ownership costs and maintenance. If the tractor was a 225-hp model, and Mike used it 150 hours and Ike used it 85 hours, who should pay whom and how much?

_____ pays _____ \$ _____

Answers

A.

	<u>Total</u>	<u>Mike</u>	<u>Ike</u>
Lease payment	\$20,000	\$10,000	\$10,000
Repairs	\$500	\$250	\$250
Total costs paid	\$20,500	\$10,250	\$10,250
Acres farmed	2,077	1,212	865
Cost per acre	\$9.87	\$9.97	\$9.87
Cost based on acres		\$11,962	\$8,538
Difference to pay		\$10,250	\$10,250
(Mike pays Ike)		- \$11,962	- \$8,538
		= - \$1,712	= \$1,712

B.

	<u>Total</u>	<u>Mike</u>	<u>Ike</u>
Estimated ownership costs (\$120,000 x 18%)	\$21,600	\$10,800	\$10,800
Repairs	\$500	\$250	\$250
Total costs paid	\$22,100	\$11,050	\$11,050
Acres farmed	2,077	1,212	865
Cost per acre	\$10.64	\$10.64	\$10.64
Cost based on acres		\$12,896	\$9,204
Difference to pay		\$11,050	\$11,050
(Mike pays Ike)		- \$12,896	- \$9,204
		= - \$1,846	= \$1,846

C.

	<u>Total</u>	<u>Mike</u>	<u>Ike</u>
Estimated ownership costs (\$.20 x 225 hp x 235 hrs)	\$10,575	\$5,287	\$5,288
Repairs	\$500	\$250	\$250
Total costs paid	\$11,575	\$5,787	\$5,788
Acres farmed	2,077	150	85
Cost per hour	\$49.26	\$49.26	\$49.26
Cost based on hours		\$7,388	\$4,187
Difference to pay		\$5,787	\$5,788
(Mike pays Ike)		- \$7,388	- \$4,187
		= - \$1,601	= \$1,601