

## B-18.04

Mel Cheek is a fishing guide on the Chenega River. The fish are usually found 20 to 50 miles upriver. Once the fish are located, Mel slows the boat to trolling speed and fishes for about 6 hours before returning to dock. Mel has noted that overall fuel costs vary based on "miles upriver" and he is considering changing his guide fee to separately charge customers for estimated fuel costs. Below is Mel's log for 15 typical days showing "miles upriver to locate fish" and "total fuel cost".

<u>Day</u>	<u>Miles Upriver</u>	<u>Fuel Cost</u>
1	37	\$86
2	41	93
3	22	73
4	28	80
5	49	99
6	25	74
7	33	85
8	37	87
9	44	93
10	24	77
11	29	80
12	45	96
13	35	83
14	36	87
15	31	80

- Prepare a scattergraph diagram for the preceding data set showing that "fixed costs" are approximately \$50 and variable costs are approximately \$1 per mile upriver.
- (optional) Use the functions within an electronic spreadsheet to prepare a regression analysis separating the costs into fixed and variable components. Do individual data points appear to fit well into the regression model?