5.

(cont.) the current month

should estimate the regression equation of maintenance costs on the next months'

machine-hours.

the previous months'

having four peak sales periods, each lasting two months

This is due to Brickman having one seasonal peak sales period that lasts 3 months and scheduling not having any peak sales periods

the end of each month, as a general practice.

maintenance in the intervening months, when production volume is low The greater the machine use in

 month right before the 3 month sales peak.

the

one month, the expected maintenance costs in later months will be greater. By analyzing the data on a the expected maintenance costs in later months will be less.

quarterly basis, the relationship between machlne hours and maintenance costs becomes

less

more

economically plausible.

|  |  |
| --- | --- |
| Data Table |  |
|  | **Month** | **Machine-Hours** | **Maintenance Costs** |  |  |
|  | January | 5,000 | $ 1,300 |  |  |
|  | February | 5,600 | 2,200 |  |  |
|  | March | 1,500 | 12,850 |  |  |
|  | April | 6,500 | 1,665 |  |  |
|  | May | 5,820 | 2,770 |  |  |
|  | June | 1,730 | 15,250 |  |  |
|  | July | 7,230 | 1,880 |  |  |
|  | August | 5,990 | 2,740 |  |  |
|  | September | 2,040 | 15,350 |  |  |
|  | October | 6,170 | 1,620 |  |  |
|  | November | 5,900 | 2,770 |  |  |
|  | December | 1,500 | 14,700 |  |  |
| Requirements |  |  |  |  |  |

**Requirements** ..... .......,................. ...........-..... .. ..............\_............ --···-······-•"..'''''''-···-·--·---· -

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" '"'

5.

(cont.)

1. Explain why Green made this comment. What is wrong with her analysis?

# 2. Upon further reflection, Sascha Green reanalyzes the data, this time comparing quarterly machine-hours with quarterly maintenance expenditures. This time, the results are very different. The regression yields the following formula:

Maintenance costs = $2,622.80 + ($1.175 x Number of machine-hours)

What caused the formula to change, in light of the fact that the data was the same?