

# Comment on “The facility layout problem”

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**Abstract:** This note points to an error in the invited review of “The facility layout problem” by Andrew Kusiak and Sundaresh S. Heragu [4] as per their information of the solution quality of the Heuristic 1 technique presented by Burkard and Stratman [3].

**Keywords:** Solution quality; Facility layout problem; Optimality

With reference to this paper of A. Kusiak and S. Heragu [4], we would like to bring to their notice as per Table 1, that the solution reported by Burkard and Stratman [3] for Nugent’s facility layout problem of size 15 with solution cost of 1126 and a solution quality of 117.5 is erroneous. The solution with a cost of 1126 is probably the result of either a typographical error or a programming error. In fact Burkard [1] solved the 15 facility problem to optimality with a solution cost of 1150 and solution quality as follows:

Solution quality

$$\begin{aligned} &= \frac{\text{cost}}{\text{lower bound cost}} * 100 \\ &= \frac{1150}{958} * 100 = 120.0. \end{aligned}$$

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## Appendix

Solution for Nugent’s 15 facility problem:

1	2	13	8	9
4	3	14	7	11
10	15	6	5	12

Cost = 1150      Solution Quality = 120.0.

## References

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