Check F · first response

This is a fictional paper planning problem. No real purchase is needed.

A desk diagram must contain 30 tape segments in the exact ratio 2 short segments: 3 long segments. Each short segment is 3/4 m long. Each long segment is 5/6 m long. Find the full length needed for this diagram.

Supplier A sells tape at $1.50 per metre; Supplier B sells it at $1.25 per metre. Each sells only whole metre units. Every purchased length is usable, joins are allowed, and there is no cutting loss in this model. At this first stage neither supplier has an order fee. The budget is $31. There is no other cost.

Buy enough whole metre units for the full needed length. Spare length may be kept. Choose a sufficient order within the budget if one exists. Treat every stated price and cutting condition as part of this fictional model.

Your task

1. Show how the ratio divides the 30 segments. Find the short and long counts. State short segments as a fraction of all segments. Calculate the total needed tape length exactly, showing the rational operations and units.

2. Compare each supplier's price per metre. Find the whole metre units, total cost and spare length in the cheapest sufficient order from each supplier. Recommend an order under the initial budget, or explain why no order works. State one assumption your decision uses.

Working may be on another sheet. Keep the first response and the review separately.

Complete notices · 1 of 3

Complete portable notices

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